Digitized by the Internet Archive
in 2017 with funding from
CLIR

https://archive.org/details/cataloguejournal00riem

CONTENTS

Catalogue 1947-1955 nos. 1-2411

Journal 1947-1954

CONTENTS

Catalogue 1947-1955 nos. 1-2411

Journal 1947-1954

Riemer, W. J.

1947 - 1955

Catalogue

nos. 1-2411

W. Riemer
1947,
1948

Catalogue

Subway Caves, ft., Shasta Co., Calif.
9 August 1947
1 Sceloporus occidentalis occidentalis
2 " graciosus gracilis
2a Hyla regilla
200 yds., W Old Station, Shasta Co., Calif.
9 August 1947
3 Thamnophis ordinoides elegans
4 mi. S Lassen National Park, State Highway #36, Tehama Co., Calif.
5 August 1947
4 Bufo boreas
University of California laboratory, Berkeley, Alameda Co., Calif.
8 September 1947
5 Gerrhonotus c. coeruleus (newborn)
6 " " " "
7 " " " "
8 " " " "
Hamilton Gulch, Berkeley, Alameda Co., Calif.
17 February 1948
9 Sceloporus occidentalis occidentalis (M-36)*
23 February 1948
10 " " " (M-37)
11 " " " (M-38)
Strawberry Canyon, Berkeley, Alameda Co., Calif.
23 February 1948
12. Sceloporus o. occidentalis (M-39)

* M-36 = special numbering series for specimens used in malaria study.

Catalogue

Strawberry Canyon, Berkeley, Alameda Co., Calif.

3 March 1948

13 Sceloporus o. occidentalis (M-40)
14 " " " (M-41)
15 " " " (M-42)
16 " " " (M-43)
17 " " " (M-44)
18 " " " (M-45)

26 March 1948

19 Sceloporus o. occidentalis (M-46)

1260 ft. SSE Grizzly Peak, Alameda Co., Calif.

26 March 1948

20 Sceloporus o. occidentalis (M-47)

Little Grizzly Peak, Alameda Co., Calif

26 March 1948

21 Sceloporus o. occidentalis (M-48)
22 " " " (M-49)

Grizzly Peak, Alameda and Contra Costa Cos, Calif.

26 March 1948

23 Sceloporus o. occidentalis (M-50)
24 " " " (M-51)

Bald Peak, Contra Costa Co., Calif

26 March 1948

25 Sceloporus o. occidentalis (M-52)
26 " " " (M-53)

Eureka Peak, Contra Costa Co., Calif.

31 March 1948

27 Sceloporus o. occidentalis (M-54)

Catalogue

Eureka Peak, Contra Costa Co., Calif.
31 March 1948

28 Sceloporus o. occidentalis (M-55)
29 " " " (M-56)
30 " " " (M-57)
31 " " " (M-58)
32 " " " (M-59)
33 " " " (M-60)
34 " " " (M-61)
35 " " " (M-62)
36 " " " (M-63)
37 " " " (M-64)
38 " " " (M-65)
39 " " " (M-66)
40 " " " (M-67)
41 " " " (M-68)
42 " " " (M-69)
43 " " " (M-70)
44 " " " (M-71)
45 " " " (M-72)
46 Deleted: No specimen. (M-73)
47 Eumeces skiltonianus (M-74)
48 " " (M-75)
49 " " (M-76)
50 " " (M-77)
51 " " (M-78)
52 " " (M-79)
53 Sceloporus o. occidentalis (M-80)

Chaparral Hill, Contra Costa-Alameda Co. Calif. 31 March 1948

54 Sceloporus o. occidentalis (M-81)

Catalogue

Lower U. C. Campus, Berkeley, Alameda Co., Calif.
14 April 1948

55 Diadophis amabilis amabilis
Top of Panoramic Way, Berkeley, Alameda Co., Calif. 23 April 1948 (See species, 28 April '48)

4/28 56 Thamnophis ~~ordinoides~~ atratus
Head of Hamilton Gulch, Berkeley, Alameda Co., Calif. 26 April 1948

57 Coluber lateralis
58 Thamnophis ~~ordinoides atratus~~ ("orange stripe") 5 May 1948
1 mi. WNW Concord, Walnut(?) Creek, Contra Costa Co., Calif.
8 May 1948

59 ♀ Sceloporus o. occidentalis
60 Pituophis c. catenifer
61 Thamnophis sirtalis infernalis-tetrataenia (intergrade)
Mitchell Canyon, near Clayton, Contra Costa Co., Calif. 8 May 1948

62 Gerrhonotus m. multicarinatus
0.5 mi. E Denverton, 20 ft., Solano Co., Calif.
8 May 1948

63 Pituophis c. catenifer
1 mi. NW Batavia, Solano Co., Calif. ~~8 May~~ 1948

64 Bufo boreas halophilus
6.5 mi. SSW Monticello, Soda Creek, Napa Co., Calif. 8 May 1948

65 Rana boylii boylii
66 " " "
67 Hyla regilla
68 Triturus ~~[illegible]~~ torosus

Catalogue

6.5 mi. SSW Monticello, Soda Creek, Napa ~~Solano~~ Co., Calif.

8 May 1948

69 Triturus torosus
70 " "
71 " "
72 " "
73 " "
73a " "

9 May 1948

74 Crotalus viridis oreganus

Pope Creek, 5.7 mi. NW Monticello, Napa Co., Calif.

9 May 1948

75 Coluber lateralis
76 Gerrhonotus m. multicarinatus
77 Eumeces skiltonianus

2 mi. SE Knoxville Eticuera Creek, Napa Co., Calif. 9 May 1948

78 Clemmys marmorata marmorata

Wildcat Canyon, N end Tilden Regional Park, Contra Costa Co., Calif.

29 May 1948

79 Charina bottae

W. Riemer
1948

Catalogue

~ 7962 Tenaya Creek, 0.5 mi. above Mirror Lake, Yosemite Valley, 4125 ft., Mariposa Co., Calif. 28 June 1948

80. Thamnophis ordinoides couchii
81. " " "

Tenaya Creek, 0.8 mi. above Mirror Lake, 4145 ft., Yosemite Valley, Mariposa Co., Calif. 29 June 1948

82 Thamnophis ordinoides couchii (juvenile)

0.2 mi SSW Vernal Falls, Yosemite Nat'l Park, 5481 ft., Mariposa Co., Calif.
1 July 1948

83 Sceloporus graciosus gracilis
84 " " "

Tenaya Canyon, 0.5 mi. above Mirror Lake, 4125 ft., Mariposa Co., Calif.
2 July 1948

85 Thamnophis ordinoides couchii

Tenaya Canyon, 2.0 mi above Mirror Lake, 4950 ft., Mariposa Co., Calif.
2 July 1948

86 Sceloporus occidentalis

W. Riemer
1948

Catalogue

Tenaya Canyon, 1.1 mi. above Mirror Lake, 4250 ft., Mariposa Co., Calif.

2 July 1948

87 Ensatina sierrae

3.5 mi. NW Tuolumne Grove Big Trees, State Hwy 120, Tuolumne Co. Calif. 4500 ft.±.

9 July 1948

88 Charina bottae

3 mi. SW Groveland, State Hwy 120, Tuolumne Co., Calif. 2500 ft.±.

9 July 1948

89 Coluber lateralis

3 mi. E Manteca, State Hwy 120, San Joaquin Co., Calif. 50 ft.±.

(Distroyed since MVZ did not want) 9 July 1948

90 Tyto alba pratincola - Barn Owl

ccn. 7993
nu 104

9 mi. NNE Coalinga, Fresno Co., Calif.

19 July 1948

91 Pituophis catenifer catenifer

W. Riemer
1948

Catalogue

1 mi. NE Laguna Beach, Orange Co., Calif. 26 July 1948

92 Gerrhonotus multicarinatus webbii

5 mi NNE Laguna Beach in Laguna Canyon, Orange Co., Calif.
26 July 1948

93 Bufo boreas halophilus
94 " " "
95 " " "
96 " " "
97 " " "
98 " " "
99 " " "
100 " " "
101 " " "

Vivian Creek, 7300±ft., 3 1/4 mi. WSW San Gorgonio Pk. San Bernardino Co., Calif.
29 July 1948

102 Sceloporus graciosus

3.5 mi. ESE Riverside, Riverside Co., Calif.
31 July 1948

103 Uta stansburiana hesperis
104 Sceloporus occidentalis biseriatus

W. Riemer
1948
&
1949

Catalogue

cn. 7985 Samuel P. Taylor State Park, Marin Co., Calif.

29 Aug. 1948

105 Triturus granulosus

Mojave River, 3 mi. N Victorville, San Bernardino Co., Calif. 19 June 1949

106 ♀ Sceloporus occidentalis biseriatus
107 Cnemidophorus t. tesselatus (not cataloged)
108 Uta stansburiana

Deep Springs, Deep Springs Valley, Inyo Co., Calif.

20 June 1949

109 Bufo exsul
110 " "
111 " "
112 " "
113 " "
114 " "
115 " "
116 " "
117 " "
118 " "
119 " "
120 " "
121 " "
122 " "
123 " "
124 " "
125 " "

W. Riemer
1949

Catalogue

Deep Springs, Deep Springs Valley, Inyo Co., Calif.
20 June 1949

126 Bufo exsul
127 " "
128 Scaphiopus hammondii
129 " "
130 " "
131 " "

2.3 mi. N Beatty, Nye Co., Nevada
20 June 1949

132 Rhinocheilus lecontei

2 mi. S Beatty, Nye Co., Nevada
21 June 1949

133 Phrynosoma platyrhinos ♂

34.2 mi. NE Warm Springs, U.S. Hwy 6, Nye Co., Nev.
22 June 1949

134 Sceloporus occidentalis
135 " "
136 " "
137 Crotaphytus collaris
138 " "
139 Cnemidophorus tesselatus

Nevada, Nye Co., Currant
22 June 1949

140 Sceloporus occidentalis
141 " "
142 " "
143 " "
~~144 " "~~
145 Uta stansburiana
146 Scaphiopus hammondii (tadpoles)

W. Riemer
1949

Catalogue

Nevada, Nye Co., Currant
22 June 1949
147 Scaphiopus hammondii (eggs)
~~148 Bufo boreas ? (tadpoles)~~
Nevada, White Pine Co., 3 mi NW Preston
22 June 1949
149 Pituophis catenifer
Utah, Salt Lake Co., 20 mi. NE Grantsville, U.S. Hwy 40
23 June 1949
150 Sceloporus graciosus
Utah, Salt Lake Co., 1.5 mi. E Murray
24 June 1949
151 Rana pipiens
152 Thamnophis elegans
Utah, Utah Co, 13 mi. NE Provo
25 June 1949
153 Thamnophis elegans
Utah, Utah Co., Provo, Campus Brigham Young University
25 June 1949
154 Thamnophis elegans.
Utah, Summit Co., 13.6 mi. NNW Heber
25 June 1949
155 Rana pipiens
156 " "
Utah, Utah Co., 7.6 mi. (by rd.) E Springville, Hobble Creek
26 June 1949
157 Sceloporus graciosus
158 " "

W. Riemer
1949

Catalogue

Utah, Utah Co., shore Utah Lake, 1 mi. W Provo
27 June 1949

159 Rana pipiens
160 " "
161 " "
162 " "
163 Pseudacris nigrita
164 " "
165 " "
166 " "
167 " "
168 " "
169 " "
170 " "
171 " "

Utah, Juab Co., 13.4 mi. S Eureka, U.S. Hwy 6
27 June 1949

172 Uta stansburiana
173 " "
174 Cnemidophorus tesselatus
175 " "
176 " "

Utah, Juab Co., 26.0 mi. SSW Eureka, sand dunes
27 June 1949

177 Sceloporus graciosus
178 " "
179 Crotaphytus wislizenii
180 " "

W. Riemer
1949

Catalogue

Utah, Garfield Co., 12.5 mi. SSW Junction, U.S. Hwy 89. 29 June 1949

181 Sceloporus undulatus

Utah, Garfield Co., 19.2 mi. SSW Junction, U.S. Hwy 89 29 June 1949

182 Sceloporus graciosus

183 Thamnophis elegans

Utah, Kane Co., 4 mi. SE Alton, Sink Valley 30 June 1949

184 Sceloporus graciosus

Utah, Kane Co., 2 mi. W Alton 30 June 1949

185 Thamnophis elegans

Utah, Kane Co., 0.2 mi. N Glendale, U.S. Hwy 89 30 June 1949

186 Sceloporus graciosus

187 " "

188 " "

189 " "

190 " "

191 Sceloporus undulatus

192 " "

Utah, Washington Co., Virgin River, 2.6 mi. SW Springdale 1 July 1949

193 Bufo compactilis

194 " "

195 " "

196 " "

197 " "

198 " "

W. Riemer
1949

Catalogue

Utah, Washington Co., Virgin River, 2.6 mi. SW Springdale 1 July 1949

199 Bufo compactilis
200 " "
201 " "
202 Bufo punctatus (?) (larvae)
203 " " (?) (eggs)
204 Sceloporus undulatus
205 " "
206 Sceloporus magister

Utah, Washington Co., Bloomington
2 July 1949

207 Scaphiopus hammondii
208 Bufo woodhousii
209 " "
210 Bufo compactilis
211 " "
212 " "
213 " "
214 " "
215 " "
216 " "

3 July 1949

217 Bufo compactilis
218 " "
219 " "
220 " "
221 " "

W. Reimer
1949

Catalogue

Utah, Washington Co., Bloomington
3 July 1949

~~222 Bufo woodhousii~~

223 " "

224 Bufo woodhousii ~~Scaphiopus hammondii~~

Utah, Washington Co., Santa Clara River, 2.5 mi. S
Saint George 3 July 1949

225 Bufo woodhousii

226 " "

227 Bufo compactilis

228 " "

Utah, Washington Co., 4.6 mi. SSW Saint
George 3 July 1949

229 Scaphiopus hammondii

230 Bufo punctatus

231 " "

232 " "

233 " "

234 " "

235 " "

236 " "

237 " "

238 " "

239 " "

240 " "

241 " "

4 July 1949

242 Sauromalus obesus

242A Phrynosoma platyrhinos

W. Riemer
1949

Catalogue

Utah, Washington Co., Bloomington
4 July 1949

243 Sceloporus magister
244 Uta stansburiana
245 " "
245A Cnemidophorus tesselatus

Utah, Washington Co., 0.5 mi. E Saint George
4 July 1949

246 Uta stansburiana

Utah, Washington Co., Santa Clara R., 2.5 mi. S Saint George
4 July 1949

247 Sceloporus magister

Arizona, Mohave Co., 13.1 mi. SW Kingman U.S. Hwy 66 8 July 1949

248 Urosaurus graciosus
249 " "
250 " "

California, San Bernardino Co., 10.9 mi. S Needles, U.S. Hwy 95 8 July 1949

251 Chionactis occipitalis

California, San Bernardino Co., 10.7 mi NW Riverside Co. line at U.S. Hwy 95 9 July 1949

252 Dipsosaurus dorsalis

Calif., San Bernardino Co., 4.1 mi. N Riverside Co. line at U.S. Hwy 95
9 July 1949

253 Cnemidophorus tesselatus

W. Riemer
1949

Catalogue

Arizona, Yuma Co., Yuma, 0.2 mi. E Center St on 1st St.
9 July 1949

254 Bufo woodhousii
255 " "
256 " "
257 " "
258 " "

Calif., Imperial Co., 12.8 mi W Winterhaven, U.S. Hwy 80
10 July 1949

259 Uma notata
260 " "

Calif., Imperial Co., Imperial Diversion Dam
11 July 1949

261 Coleonyx variegatus

Calif., Imperial Co., 0.6 mi. WSW Imperial Diversion Dam
11 July 1949

262 Rana pipiens
263 " "

Arizona, Maricopa Co., 6.9 mi. WSW Gila Bend
13 July 1949

264 Callisaurus draconoides
265 Cnemidophorus tesselatus
266 " "
267 " "

Arizona, Pima Co., 1.5 mi. NNE Ajo.
13 July 1949

268 Bufo alvarius
269 Bufo alvarius

W. Rainer
1949

Catalogue

Arizona, Pima Co., 7.0 mi. NNE Ajo
13 July 1949

270 Arizona elegans

Arizona, Pima Co., Rowood
14 July 1949

271 Bufo cognatus
272 " "
273 " "

Arizona, Pima Co., 1.0 mi. SE Rowood
14 July 1949

274 Cnemidophorus tesselatus

Arizona, Pima Co., 36.0 mi. WSW Escuela, State Hwy 86
14 July 1949

275 Callisaurus draconoides
276 Holbrookia maculata
277 " "
278 " "
279 " "
280 Cnemidophorus tesselatus
281 " "
282 Cnemidophorus gularis

Arizona, Santa Cruz Co., 2 mi. NNW Nogales
State Hwy 89 15 July 1949

283 Bufo woodhousii
284 Phrynosoma solare
285 " "
286 " "

W. Riemer
1949

Catalogue

Arizona, Santa Cruz Co., 4.0 mi. NNW Nogales
15 July 1949

287 Rana pipiens
288 " "
289 " "
290 " "
291 " "

Arizona, Santa Cruz Co., Peña Blanca Springs
16 July 1949

292 Holbrookia maculata
293 Sceloporus clarkii
294 " "
295 Cnemidophorus gularis
296 " "
297 " "
298 Sceloporus clarkii
299 Thamnophis eques

Arizona, Santa Cruz Co., 1 mi. NE Peña Blanca Springs 16 July 1949

300 Diadophis regalis
301 Microhyla carolinensis
302 Hyla arenicola
303 " "
304 " "
305 Bufo punctatus
306 " "
307 " "
308 " "

W. Reimer
1949

Catalogue

Arizona, Santa Cruz Co., 1 mi. NE Peña Blanca Springs 16 July 1949

309 Bufo punctatus
310 " "
311 " "
312 " "

Arizona, Santa Cruz Co., Peña Blanca Springs 16 July 1949

313 Bufo alvarius
314 " "
315 Rana pipiens

Arizona, Santa Cruz Co., Peña Blanca Springs 17 July 1949

316 Scaphiopus hammondii

Arizona, Santa Cruz Co., 1½ mi. W Peña Blanca Springs 17 July 1949

317 Bufo punctatus

Arizona, Santa Cruz Co., 2 mi. W Peña Blanca Springs 17 July 1949

318 Rana pipiens
319 " "
320 Microhyla carolinensis
321 " "
322 " "
323 " "
324 " "
325 " "
326 " "
327 " "

W. Riemer
1949

Catalogue

Arizona, Santa Cruz Co., 2 mi. W Peña Blanca Springs
17 July 1949

328 Microhyla carolinensis
329 " "
330 Crotalus mollosus

Arizona, Santa Cruz Co., Peña Blanca Springs
18 July 1949

331 Eumeces callicephalus

Arizona, Santa Cruz Co., Sycamore Canyon, Yanks Spring 18 July 1949

332 Sceloporus clarkii

Arizona, Santa Cruz Co., Sycamore Canyon, 1/4 mi. SW Yanks Spring
18 July 1949

333 Cnemidophorus gularis
334 " "
335 " "
336 Holbrookia maculata
337 Thamnophis eques
338 " "

Arizona, Santa Cruz Co., Sycamore Canyon, 1/2 mi. SW Yanks Spring 18 July 1949

339 Rana tarahumarae
340 " "
~~341 Thamnophis eques~~

Arizona, Pima Co., Hdqtrs Santa Rita Experimental Range
21 July 1949

341 Urosaurus ornatus

Catalogue

W. Riemer
1949

Arizona, Pima Co., Hdqtrs. Santa Rita Experimental Range
21 July 1949

342 Hyla arenicolor
343 " "
344 " "
345 " "
346 " "
347 " "
348 " "
349 " "
350 " "
351 " "

Arizona, Cochise Co., Fry
21 July 1949

352 Thamnophis marcianus
353 " "
354 " "
355 " "

Arizona, Cochise Co., Fort Huachuca
21 July 1949

356 Rana pipiens
357 " "
358 Scaphiopus hammondii
359 Bufo woodhousii
22 July 1949
360 Scaphiopus hammondii

~~Arizona, Cochise Co., Carr Canyon, Huachuca~~ Mts.

W. Riemer
1949

Catalogue

Arizona, Cochise Co., Huachuca Mts, Carr Canyon
22 July 1949

361 Sceloporus jarrovii
362 " "
363 " "
364 " "
365 " "
366 Crotalus triseriatus

Arizona, Cochise Co., 2 mi. NNE Douglas, U.S. Hwy 80
23 July 1949

367 Scaphiopus hammondii
368 Bufo insidior
369 " "

Arizona, Cochise Co., 10.5 mi. NNE Douglas, U.S. Hwy 80
23 July 1949

370 Scaphiopus couchii

Arizona, Cochise Co., 32 mi. NE Douglas, U.S. Hwy 80
24 July 1949

371 Bufo cognatus
372 Cnemidophorus gularis
373 Holbrookia maculata

Arizona, Graham Co., 16.4 mi. NW Pima, U.S. Hwy 70
24 July 1949

374 Scaphiopus hammondii
375 Bufo woodhousii
376 Bufo cognatus
377 " "

W. Riemer
1949

Catalogue

Arizona, Graham Co., 24.9 mi. E Pinal-Graham Co. line, & U.S. Hwy 70 — 24 July 1949

378 Arizona elegans

~~379~~ Arizona, Graham Co., 17.9 mi E Pinal-Graham Co line, and U.S. Hwy 70 — 24 July 1949

379 Rhinocheilus lecontei

Arizona, Gila Co., headwaters Rose Creek, Rose Creek Lodge
25 July 1949

380 Bufo compactilis
381 " "
382 " "
383 " "
384 " "
385 " "
386 " "

26 July 1949

387 Urosaurus ornatus
388 " "
389 Coluber taeniatus

Arizona, Maricopa Co., 10.2 mi. NE Apache Jct., State Hwy 88 — 26 July 1949

390 Cnemidophorus tesselatus
391 Urosaurus ornatus

Arizona, Yavapai Co., 6 mi. SW Yarnell, U.S. Hwy 89
27 July 1949

392 Urosaurus ornatus

W. Riemer
1949

Catalogue

Arizona, Yavapai Co., 1 mi. SW Yarnell, U.S. Hwy 89
27 July 1949

393 Urosaurus ornatus
394 ~~Callisaurus draconoides~~ Holbrookia texana
395 Xantusia arizonae
396 Xantusia arizonae

Arizona, Coconino Co., 8 mi. SSW Flagstaff, U.S. Alt. Hwy 89
28 July 1949

397 Ambystoma tigrinum
398 " "
399 Sceloporus undulatus
400 Thamnophis elegans

Arizona, Navajo Co., 1.5 mi. N Lakeside
~~401~~ 28 July 1949
401 Sceloporus undulatus

Arizona, Navajo Co., 0.8 mi. NNW Lakeside, State Hwy 173
29 July 1949

402 Rana pipiens
403 " "
404 Pseudacris nigrita

Arizona, Navajo Co., 5 mi. S Holbrook, State Hwy 77
29 July 1949

405 Cnemidophorus gularis

Arizona, Navajo Co., Pinetop, State Hwy 173
29 July 1949

406 Ambystoma tigrinum (larva)
407 " " "
408 Bufo woodhousii (?)

W. Riemer
1949

Catalogue

New Mexico, Grant Co., 1 mi. above XSX Ranch, E. Fork Gila River

1 August 1949

409 Cnemidophorus gularis

409A Thamnophis eques

410 Thamnophis angustirostris

New Mexico, Grant Co., Mimbres, State Hwy 61

1 August 1949

411 Bufo compactilis

New Mexico, Grant Co. 0.4 mi. NE Santa Rita, State Hwy 180

1 August 1949

412 Ficimia cana

New Mexico, Otero Co., Cloudcroft, 8600 ft±

4 August 1949

413 Plethodon hardii

414 " "

415 Phrynosoma douglassii

New Mexico, Otero Co., White Sands Nat'l Mon.

5 August 1949

416 Holbrookia maculata

New Mexico, Otero Co., Alamogordo

6 August 1949

417 Uta stansburiana

418 " "

419 Cnemidophorus gularis

420 Cnemidophorus perplexus

W. Riemer
1949

Catalogue

New Mexico, Chaves Co., 2 mi. W Roswell
7 August 1949

421 Eumeces taylori
422 Holbrookia maculata

New Mexico, Eddy Co., White's City
8 August 1949

423 Coleonyx brevis
424 " "
425 " "

New Mexico, Roosevelt Co., 24.2 mi. N Milne
Sand, State Hwy 18
10 August 1949

426 Arizona elegans

New Mexico, Curry Co., 2.9 mi. E Melrose, U.S.
Hwy 60 and 84 10 August 1949

427 Terrapene ornata

New Mexico, De Baca Co., 9 mi. E Fort Sumner
10 August 1949

428 Scaphiopus hammondii (?)
429 " "
430 " "
431 " "
432 " "
433 " "
434 " "
435 " "
436 " "
437 " "
438 " "

W. Riemer
1949

Catalogue

New Mexico, De Baca Co., 9 mi. E Fort Sumner
10 August 1949

439 Scaphiopus hammondii
440 " "
441 " "
442 " "
443 " "
444 " "

New Mexico, Socorro Co., 6.4 mi. E Bernardo, U.S. Hwy 60
11 August 1949

445 Terrapene ornata

New Mexico, Bernalillo Co., 6 mi. NNE Tijera
State Hwy 10
13 August 1949

446 Sceloporus undulatus
447 " "
448 " "
449 " "

New Mexico, Sandoval Co., 12 mi. W, 4 mi. S
Los Alamos, 8750 ft. ±
14 August 1949

450 Plethodon
451 "
452 "
453 "
454 "
455 "
456 "
457 "

W. Riemer
1949

Catalogue

New Mexico, Sandoval Co., 12 mi. W, 4 mi. S
Los Alamos, 8750 ft ±
14 August 1949

458 Plethodon
New Mexico, Sandoval Co., Holy Ghost Recreation Area
W Tererro, 7850 ft. 16 August 1949

459 Thamnophis elegans
Colorado, Las Animas Co., Sopris, State Hwy 238
17 August 1949

460 Sceloporus undulatus
Colorado, Las Animas Co., 1.9 mi. SE Aguilar,
U.S. Hwy 85-87
17 August 1949

461 Sceloporus undulatus
Colorado, Huerfano Co., 9.9 mi. NNW Aguilar,
U.S. Hwy 85-87
17 August 1949

462 Sorex sp.
Colorado, El Paso Co., 4.3 mi. SE Colorado Springs,
U.S. Hwy 85-87
18 August 1949

463 Rana pipiens
Colorado, Weld Co., vicinity Roggen, U.S. Hwy 6
19 August 1949

464 Terrapene ornata
465 " " given to D. J. Gould

W. Riemer
1949

Catalogue

Colorado, Weld Co., 5 mi. WSW Wiggins (in Morgan Co.)

20 August 1949

466 Holbrookia maculata
467 Eumeces multivirgatus
468 Pituophis catenifer
469 Terrapene ornata

Colorado, Jackson Co., Rand, State Hwy 125

22 August 1949

470 Pseudacris nigrita

Colorado, Jackson Co., 10.9 mi. W Hebron, Grizzly Creek

22 August 1949

471 Rana pipiens
472 " "
473 " "
474 Bufo boreas boreas
475 " " "
476 " " "
477 " " "
478 " " "
479 " " "
480 " " "

Colorado, Jackson Co., 5 mi. ESE Rabbit Ears Peak, State Hwy 14

23 August 1949

481 Rana sylvatica
482 " " (group of young) (27)
483 Pseudacris nigrita (" " ") (33)

W. Riemer
1949

Catalogue

Colorado, Summit Co., 0.5 mi. NE Frisco, 9100 ft. ±

24 August 1949

484 Bufo boreas boreas

Colorado, Delta Co., 14.6 mi. WNW Delta, U.S. Hwy 50

25 August 1949

485 Sceloporus undulatus

486 " "

487 Crotaphytus collaris

Arizona, Mohave Co., Peachtree Springs

27 August 1949

488 Holbrookia maculata

W. Riemer
1949

Catalogue

Calif., Contra Costa Co., Lafayette Reservoir
24 Sept. 1949

489 Triturus torosus
490 " "
491 " "
492 " "
493 " "
494 " "
495 " "
496 " "
497 " "
498 " "
499 " "
500 " "
501 " "
502 " "
503 " "
504 " "
505 " "
506 " "
507 " "
508 " "
509 " "
510 " "
511 " "
512 " "
513 " "
514 " "

W. Riemer
1949

Catalogue

Calif., Contra Costa Co., Lafayette Reservoir
24 Sept. 1949

515	Triturus	torosus
516	"	"
517	"	"
518	"	"
519	"	"
520	"	"
521	"	"
522	"	"
523	"	"
524	"	"
525	"	"
526	"	"
527	"	"
528	"	"
529	"	"
530	"	"
531	"	"
532	"	"
533	"	"
534	"	"
535	"	"
536	"	"
537	"	"
538	"	"
539	"	"
540	"	"

W. Riemer
1949

Catalogue

Calif., Contra Costa Co., Lafayette Reservoir
24 Sept. 1949

541 Triturus torosus

Calif.: Santa Clara Co., Campbell Cr., Saratoga
27 Nov. 1949

542 Triturus torosus
543 Aneides flavipunctatus
544 " "
545 " "

Calif.: Santa Clara Co., Los Gatos Cr., Los Gatos
27 Nov. 1949

546 Triturus torosus

Calif.: Santa Clara Co., Los Gatos
8 Dec. 1949

547 Triturus torosus
548 Aneides flavipunctatus

Calif.: Santa Clara Co., Saratoga
8 Dec. 1949

549 Aneides flavipunctatus

Calif.: Santa Clara Co., 4 mi. W Saratoga
8 Dec. 1949

550 Triturus torosus
551 Ensatina eschscholtzii
552 " "

Calif.: Santa Clara Co., Stevens Creek, 3 mi. S, 2 mi. W Cupertino
8 Dec. 1949

553 Triturus torosus
554 " " adult — destroyed for skin

W. Riemer
1949

Catalogue

Calif.: Santa Clara Co., Stevens Creek, 3 mi. S, 2 mi. W Cupertino 8 Dec. 1949

555 Triturus torosus
556 " " adult - destroyed for skin
557 " "
558 " "
559 " " adult - destroyed for skin
560 Bufo boreas

Calif.: Marin Co., 3 mi W, 1 mi. N Las Gallinas
18 Dec. 1949

561 Triturus torosus
562 Aneides lugubris

Calif.: Marin Co., 2.5 mi. W, 0.5 mi. N Las Gallinas
18 Dec. 1949

563 Triturus granulosus

Calif.: Marin Co., 1.5 mi. W, 0.5 mi. N Las Gallinas
18 Dec. 1949

564 Triturus granulosus
565 Ensatina eschscholtzii
566 Aneides lugubris adult - used experimentally
567 " "
568 " "
569 " "
570 " "
571 Bufo boreas
572 Gerrhonotus multicarinatus
573 " "
574 " "

W. Riemer
1949
1950

Catalogue

Calif.: Marin Co., 5 mi. W, 1 mi. N Novato
18 Dec. 1949

575 Triturus granulosus
576 " "
577 " "
578 Ensatina eschscholtzii - spoiled and destroyed
579 " " - " " "
580 " " - " " "

Calif.: Marin Co., 0.8 mi. W Point San Quentin
18 Dec. 1949

581 Triturus torosus
582 " "
583 " "

Calif.: Contra Costa Co., Lafayette Reservoir
16 Feb. 1950

584 Triturus torosus killed 15 hrs after capture
585 " " " " "
586 " " " " "
587 " " " " "
588 " " " " "
589 " " " " "
590 " " " " "
591 " " " " "
592 " " " " "
593 " " " " "
594 " " " " "
595 " " " " "
596 " " " " "

W. Riemer
1950

Catalogue

Calif.: Contra Costa Co., Lafayette Reservoir
16 Feb. 1950

597	Triturus	torosus	killed	15 hrs	after	capture
598	"	"	"	"	"	
599	"	"	"	"	"	
600	"	"	"	"	"	
601	"	"	"	"	"	
602	"	"	"	"	"	
603	"	"	"	"	"	
604	"	"	"	"	"	

605 Contia tenuis

Calif.: Contra Costa Co., 5 mi. W Byron
19 Feb. 1950

606 Rana boylii

W. Riemer
1950

Catalogue

New Mexico: Otero Co., Cloudcroft, 8500 ft. ±

2 March 1950

607 ♀ Junco —

Texas: Culbertson Co., ~~E base~~ 8 mi. NE Guadalupe Peak, 5300 ft., McKittrick Canyon

4 March 1950

608 ♂ Junco [DISCARDED 8-1-50] —

609 ♀ " 18 gm

610 ♀ Bewick wren largest ovum < 1 mm —

611 ♂ Greenbacked Goldfinch —

612 ~~Urosaurus ornatus~~ Uta ornata linearis

613 " " " " "

614 " " " " "

5 March 1950

615 ~~Urosaurus ornatus~~ Uta ornata linearis

616 ♂? Greenbacked Goldfinch 10.1 gm

617 Sceloporus undulatus consobrinus

618 " " "

619 Sceloporus poinsettii

Texas: El Paso Co., 10 mi. E, 3½ mi. S Mt. Franklin

9 March 1950

620 Uta stansburiana stejnegeri

621 " " "

622 " " "

623 " " "

624 " " "

625 ♀ " " " ova 9 + 10 mm

626 " " "

W. Rieman
1950

Catalogue

Texas: El Paso Co., 10 mi. E, 3½ mi. S Mt. Franklin

9 March 1950

627 *Uta stansburiana stejnegeri*
628 " " "
629 " " "
630 " " "
631 " " "
632 " " "
633 *Holbrookia texana*

Texas: Hudspeth Co., 8 mi. S, 2 mi. E Sierra Blanca, Devils Ridge

11 March 1950

634 ♀ *Lanius* ova 1 mm. 51.2 gm
635 ♂ Black chin sparrow test. 2 mm. 11.7 gm

Texas: Hudspeth Co., 10 mi. SW Eagle Peak

11 March 1950

636 *Holbrookia texana*

12 March 1950

637 ♂ [illegible] test. 2 mm 27.5 gm

Texas: Hudspeth Co., 10 mi. W Eagle Peak

12 March 1950

638 ♀ Thrush yellow iris ova not enlarged 42.3 gm

Texas: Hudspeth Co., 20 mi. SE Sierra Blanca, western base Eagle Mts.

12 March 1950

639 *Phrynosoma modestum*

13 March 1950

640 *Sceloporus undulatus consobrinus*

W. Riemer
1950

Catalogue

Texas: Hudspeth Co., 20 mi. SE Sierra Blanca, western base of Eagle Mts.

13 March 1950

641 *Cnemidophorus inornatus*

642 ♀ Brewer's Sparrow(?) ova not enlarged 9.6 gm

moving with flock of the desert sparrow

643 ♂ *Lanius* test. 10 mm 53.5 gm

644 ♂ Thrasher test 11 mm iris orange 92.0 gm

Mexico: Durango: 3 mi. SW El Salto, 8400 ft. ±

18 March 1950

645 *Rana pipiens*

19 March 1950

646 ♂ *Turdus* test. 3 mm 67.0 gm

647 ♀ *Junco* ova not enlarged 19.5 gm

648 ♂ *Sitta* test. 4 mm 17.7 gm

649 ♂ Jay test. 5 mm 107.2 gm

650 ♀ [illegible] ova not enlarged 7.3 gm

Mexico: Aguascalientes: 10 mi. N Aguascalientes

20 March 1950

651 *Rana pipiens*

652 " "

Mexico: Chiapas: 25 mi. W Tuxtla Gutierrez, 2000 ft.

25 Mar. 1950

653 ♀ Magpie Jay ovum 3 mm 185.6 gm.

Mexico: Chiapas: 6 mi. SE San Cristobal, 7300 ft.

26 Mar. 1950

654 ♂ Wilson's warbler test. 1 mm 7.4 gm

sitting quietly in shrub, 6-8 above ground, 1400 hrs.

W. Riemer
1950

Catalogue

Mexico: Chiapas: 6 mi. SE San Cristobal, 7300 ft.
26 March 1950

655 ♂ test. 1 mm 12.9 gm.
actively feeding from small shrubs, flycatcher fashion, 1800 hr, (sun down) Mate (?) present. Slight development of fat.

656 Bolitoglossa moreleti
657 ♀ " " gravid
658 " "
659 " "
660 " "
661 " "
662 " "
663 " "
664 " "
665 " "

(658–665:) young. Salt and pepper below. Dorsum yellowish, rufous, or olive but always with gold or silvery cast. Tails lighter tending toward yellow.

#656 rusty buff with black irregular spots dorsally, sides, venter and upper surfaces of feet salt and pepper with white predominating on venter. Iris red gold, pupil horizontally elliptical.

#657 suggestion of gold as suffusion in vertebral area of back and tail, being replaced on sides by violet or pale blue, and stronger suffusion of discernible dots. Also irregular dark spots on back!. Venter salt and pepper. Gular less dark. Iris bright gold changing to brown near pupil. Pupil small and elliptical horizontally,

W. Riemer
1950

Catalogue

Mexico: Chiapas: 6 mi. SE San Cristobal, 7300 ft.

26 March 1950

666 Plectrohyla matudai
667 " "
668 " "
669 " "

#666 Dorsum light green with irregular gold suffusion. Venter dirty white. Iris light golden yellow.

670 Rana pipiens
671 " "

#670 Dorsum dark olive green with golden brown blotches. Limbs brownish. Yellow spots on concealed portions of hind limbs. Iris dark gold.

672 Sceloporus malachiticus taeniocnemis
Dorsum of body and head brassy yellow green, scales margined laterally with black. Tail dorsally turquoise. Black patch above and in front of fore limb. Venter, deep sky blue, patches on abdomen and gular continuous. Front half of chin yellow. Iris, very pale gold.

673 Rhadinaea lachrymans
Body and tail: dorsally bright tan, ventrally chrome yellow. Head, darker dorsally and lighter ventrally than body. Iris:

27 March 1950

674 ♂ [illegible] test. 4 mm ——
Bill yellow, feet gray yellow, eye ring orange red.

W. Riemer
1950

Catalogue

Mexico: Chiapas: 6 mi. SE San Cristobal, 7300 ft.

27 March 1950

674 cont. Taken while sitting on low exposed twig of pine in shade. Mate(?) present.

675 ♂ Pepper shrike test. 2 mm. 26.2 gm
Taken while perched in bush. Iris red brown. Feet bluish pink. Bill blue gray below, silver gray above.

676 ♀ ova not enlarged 9.9 gm.
Feeding from shrub in open area. 1100 hrs.

677 ♀ ovum 2 mm 10.7 gm

678 Anolis sp?
Taken on pine-oak leaf litter in open forest. Vertebral stripe dark gray, sides gray brown, venter speckled rust, dewlap scales yellow skin beneath bright orange. Deep brown blotch behind eye. Iris green gold.

28 March 1950

679 ♂ Junco test. 3 mm. 22.6 gm
Feeding on branch of pine, 20 ft. above ground, 0700. Iris chrome yellow, legs and feet yellowish white, bill yellowish below brown above.

680 ♀ Warbler ova not enlarged 11.1 gm
Feeding in small bush, 0700 hrs. Iris black brown, bill black brown, legs sooty brown

681 Anolis sp?
Vertebral stripe ~~soot~~, sides cinnamon brown, rust on venter, fan yellow scales orangish skin.

W. Riemer
1950

Catalogue

Mexico: Chiapas: 6 mi. SE San Cristobal, 7300 ft.

29 March 1950

682 ♀ *Myadestes obscurus* ovum 2 mm 41.5 gm.
Iris black brown, feet sooty tan, bill blackish.
One of pair in low dense vegetation in thick forest. Quiet.

683 ♂ *Aphelocoma unicolor* test. 12 mm 137.0 gm

684 ♂ " " test. 10 mm 142.0 gm

685 *Bolitoglossa moreleti*
Dorsal surface tail buffy cream with spots of that color dorso-laterally on body, dorsally body suffused with gold and violet. Venter salt and pepper with mostly salt present.

686 *Bolitoglossa moreleti*
Same as #685 except dorsum mostly buffy cream with dark spots dorso-laterally on body.
Iris gold.

687 *Bolitoglossa moreleti*
Tail buffy cream and much lighter than rest of body.

30 March 1950

688 *Bolitoglossa moreleti*
Dorsal side of tail rust, dorsal side body also rust but with heavy suffusion of brown.
Venter salt and pepper. Iris gold.

689 *Ergaticus versicolor* test. 7 mm 8.4 gm
Feeding in small bush in steep forested canyon. Understory dense. Pines and broadleaves. Iris brown, legs buff.

W. Rainer
1950

Catalogue

Mexico: Chiapas: 6 mi. SE San Cristobal, 7300 ft.

30 March 1950

690 ♂ Dendroica townsendi test. 1.5 mm 9.8 mm
Legs and iris brown. Feeding in mixed flock of small birds

691 ♀ Balanosphyra formicivora ova 1 mm 71.6 gm
Iris pinkish white

692 ♀ Balanosphyra formicivora ova not enlarged 63.1 gm
Iris pearl gray

693 skeleton ♂ Turdus rufitorques test. 12 mm. 77.4 gm

694 ♂ " " " " " 62.5 gm

695 ♂ Trogan mexicanus test. 5 mm. 70.0 gm

1 April 1950

696 ♂ Lamprolaima test 2 mm 8.2 gm
Feeding in and above dense stand of very young (15-20 ft.) pines and broadleafs. 2 others present.
Iris black; feet brown above, cream below; bill black.

697 ♂ test. 5 mm 5.0 gm
Vireo

698 ♂ test. 6 mm 13.5 gm

699 Bolitoglossa moreleti
Dorsum reddish tan. Iris dark golden brown.

700 Bolitoglossa moreleti
Dorsum of tail rust, of body tannish brown.

701 Bolitoglossa moreleti
Dorsum of tail tannish cream, of body brown, iris golden brown

702 ♀ Pituophis deppei lineaticollis 152 cm
Dorsum black and cream-tan, iris pale yellow.

W. Riemer
1950

Catalogue

Mexico: Chiapas: 6 mi. SE San Cristobal, 7300 ft.

1 April 1950

703 ♀ Bothrops godmani 38 cm

704 Sceloporus malachiticus (blue belly) taeniocnemis

705 " " " "

706 " " " "

707 " " " "

708 Sceloporus " (orange belly) "

709 " " " "

710 " " " "

711 " " " "

712 " " " "

713 " " " "

714 " " " "

715 " " " "

2 April 1950

716 Rana pipiens

Under piece of bark at edge of swampy area of stream. Others along shore, exposed at 1630 hrs.

717 ♀ [illegible] ovum 2 mm 26.2 gm

Exposed perch in shrub, 12 ft. off ground, in open grassy area.

718 ♂ Hermit thrush test. 3 mm 31.5 gm

On ground, low rocks and stumps. Open pine slope at edge of stream

3 April 1950

719 ♂ Tanager test. 10 mm 35.0 gm

Singing from top of pine. Iris brown. Legs gray.

W. Riemer
1950

Catalogue

Mexico: Chiapas: 6 mi. SE San Cristobal, 7300 ft.

3 April 1950

720 ♀(?) Empidonax — ova not enlarged — 10.9 gm
Exposed perch on shrub in open grassy area.

skel

721 ♀ Townsend warbler — ova not enlarged — 9.0 gm
Feeding in small shrub in open grassy area

722 ♀ Dendroica occidentalis — ova not enlarged — 9.7 gm

723 ♀ Cyanositta stelleri — ovum 2 mm — 96.5 gm

724 Rana pipiens

725 " "

726 ~~Hyla~~ Plectrohyla matudai

727 Rana (?pipiens) ~~larvae~~

728 Plectrohyla (?matudai) larvae

729 ~~Eumeces~~ Scincella (= Leiolopisma) assata taylori — much to high an elevation for this race

4 April 1950

730 sex? Cardellina rubifrons — 11.5 gm
Feeding in small trees in semi-dense woods

731 ♀ Balanosphyra formicivora — ova < 1 mm. — 64.0 gm
Exposed perch in large tree on steep forested slope

732 ♂ [illegible] — test. 2.5 mm — 8.3 gm
Exposed perch of large tree on heavy forested ridge.

733 ♀ — ova 1 mm — 26.2 gm
Exposed perch in young pine, open grassy area.

734 Bolitoglossa moraleti (coll. C. Koford)
Under bark of stump in exposed cut-over area

735 Sceloporus ~~malachiticus~~ taeniocnemis (orange belly) (coll. C. Kofford)
Under bark of stump in exposed cut-over area

W. Riemer
1950

Catalogue

Mexico: Chiapas: 6 mi. SE San Cristobal, 7300 ft.

4 April 1950

736 Sceloporus ~~malachiticus~~ taeniocnemis (blue belly) (coll. C. Koford)
On rock in exposed cut-over area.

737 Sceloporus ~~malachiticus~~ taeniocnemis (blue belly) 34.0° C
On rock ~~on~~ steep forested slope.

Mexico: Chiapas: 28 mi. ESE Comitan, 4900 ft., San Jose

5 April 1950

738 Hyla eximia ~~(?)~~
Grass and pine needle mat, open pine woods, near stream with jungle tangle

739 ~~Hyla~~ Smilisca b. baudinii
Grass and pine needle mat, open pine woods, near stream with jungle tangle.

6 April 1950

740 ♀ Sialia sialis largest ovum 7 mm 33.2 gm
Perched atop tall dead pine in open pine woods.
Iris brown, legs and bill black, soles yellow.

741 ♂ Sialia sialis test. 11 mm —
Perched atop projection on fallen log, open pine woods

742 ♂ Troglodytes musculus test. 7 mm 10.8 gm
In small blackberry thicket in open pine woods.
Iris brown

743 ♂ Troglodytes musculus test. 6 mm —
In small blackberry thicket in open pine woods.

7 April 1950

744 ♀ Myiarchus largest ovum 2 mm. 19.6 gm
Exposed perch, small tree, semi-open woods. Iris brown.

W. Riemer
1950

Catalogue

7 Apr. Mexico: Chiapas: 28 mi. ESE Comitan, 4900 ft., San Jose

745 ♂ Contopus pertinax test. 8 mm 23.8 gm.
Exposed perch, small tree, open pine woods.

skeleton
746 ♂ Aphelocoma unicolor test 13 mm 122.3 gm
Tall pine at edge of dense riparian jungle growth.

747 ♀ Colaptes cafer largest ovum 2½ mm 126.5 gm
With 3 others in small pine, semi-open woods.

(coll. C. Koford)
748 ♀ Contopus pertinax largest ovum 1 mm 22.4 gm

8 Apr.

749 ♂ Aphelocoma unicolor test. 13 mm 125.5 gm
Tall pine near jungle tangle

750 ♂ Trogan mexicanus test 7 mm 85.0 gm
Edge of dense jungle growth along stream bed, in tree.

751 ♂ [illegible] test 12 mm 271.0 gm
Near lakeshore, on ground

9 Apr.
skeleton
752 ♀ Sialia sialis largest ovum 1 mm 27.8 gm
Top of dead erect trunk of tree, 20 ft. above ground.
Open pine woods.

(coll. C. Koford)
753 ♀ Myiarchus largest ovum 1 mm 10.2 gm
(coll. C. Koford)
skeleton
754 ♀ Cyclarhis " " 2 mm 31.3 gm

755 Rana pipiens

756 Rana pipiens

10 Apr.

757 ♂ [illegible] test. 10 mm 350.0 gm
Small sedge marsh in clearing in pine woods
(coll. C. Koford)

758 ♂ Myiarchus test. 12 mm 21.0 gm

759 Eleutherodactylus alfredi (coll. C. Koford)
Under damp rotten log at mouth to limestone bat cave.

W. Riemer
1950

Catalogue

10 Apr. Mexico: Chiapas: 28 mi. ESE Comitan, 4900 ft.; San Jose.

760 Hyla ~~richardsi (?)~~ underwoodi

761 Rana pipiens

762 " "

763 " "

764 " "

765 ~~Rana~~ Leptodactylus labialis

766 Anolis sp?

767 " "

768 Sceloporus teapensis (orange throat)

769 " v. variabilis (violet belly)

770 Thamnophis sauritus chalceus

771 ~~Micrurus~~ Pliocercus elapoides schmidti 56.3 cm

11 Apr.

772 Sceloporus v. variabilis (violet belly) (coll. C. Koford)

12 Apr.

773 ♀ Contopus pertinax largest ovum 1 mm 21.5 gm
Exposed perch, 20 ft. above ground in large oak. Dense island of woods.

774 ♀ Turdus rufitorques brood patch 79.0 gm
Exposed perch in pine in open pine woods

775 ♂ Phloeoceastes guatemalensis test. 3 mm 180.2 gm
Exposed perch 30 ft. from ground in tall pine in close pine woods. 10-12 others about.

776 ♂ Phloeoceastes guatemalensis test. 5 mm 249.5 gm
Exposed perch on trunk of pine, dense pine woods.

777 Rana pipiens

778 " "

W. Riemer
1950

Catalogue

12 Apr. Mexico: Chiapas: 28 mi. ESE Comitan, 4900 ft., San Jose

779 Rana pipiens

780 " "

781 " "

13 Apr.

782 Thamnophis sauritus chalceus 80.0 cm
Brought in by native. Said to be taken in grass by lake.

783 Anolis petersii
Brought in by native. Taken on roadway in open pine forest near jungle growth of stream-bed. Said to live in large oaks.

784 ♂(?) Dendroica virens 9.0 gm

785 Sceloporus s. siniferus
alcoholic

786 Aphelocoma unicolor 141.0 gm
(coll. C. Koford)

787 ♂ test. 6 mm 47 gm
(coll. C. Koford)

788 ♂ test. 14 mm 45½ gm
(coll. C. Koford)

789 ♂ test. 10 mm 41 gm
(coll. C. Koford)

790 ♂ test. 17 mm 57 gm
(coll. C. Koford)

791 ♀ largest ovum 2 mm 122½ gm

15 Apr.

792 Anolis sp?

793 " "

794 Sceloporus teapensis (orange throat)

795 " v. variabilis (violet belly)

796 ♂ Arremonops test. 7 mm 19.5 gm

797 ♀ Campylorhincus zonatus largest ovum 1 mm 35 gm
skeleton

798 ♂ Trogan ~~elegans~~ collaris test. 7 mm 64 gm

W. Riemer
1950

Catalogue

15 Apr. México: Chiapas: 28 mi. ESE Comitan, 4900 ft., San Jose

799 ♀ *Campylorhincus zonatus* largest ovum 1 mm 33½ gm

800 ♂ *Aulacorynchus* test. 9 mm 173 gm

16 Apr.

801 ♂ [illegible] test. 1 mm 9 gm

802 ♂ Yellow Throat test. 1½ mm 10 gm

803 ♀ Lincoln Sparrow ova not enlarged 15 gm

804 ♀ [illegible] largest ovum 1 mm 38 gm

805 Thalerophis m. mexicanus 127. cm

17 Apr.

806 Bufo coccifer

807 Bufo (? coccifer) larvae

808 ♂ *Geothlypis trichas* test. 1 mm 11 gm
In four foot grasses at edge of lake water. Grass in clumps. Secretive.

809 ♀ *Geothlypis trichas* ova not enlarged 9½ gm

810 ♂ *Spizella passerina* test. 10 mm 14 gm
Exposed perch in pine, open pine forest.

811 ♂ *Spizella passerina* test. enlarged 13½ gm

812 ♀ *Basileuterus rufifrons* largest ovum 1.5 mm 11 gm

813 ♂ [illegible] test. 12 mm 59 gm
Top of bush, open meadow near lake shore

814 ♂ Icterid test. 5 mm 66 gm
Dense shrubbery by lake shore

815 ♀ *Lepidocolaptes* largest ovum 1 mm 29 gm

816 ♀ *Tyrannus crassirostris* ova not enlarged 31½ gm

817 ♂ *Aphelocoma unicolor* test. 15 mm 153 gm

W. Reimer
1950

Catalogue

18 Apr. Mexico: Chiapas: 28 mi. ESE Comitan, 4900 ft., San Jose

818 ♀ Peromyscus no emb. 18.0-6.0 (tail broken) -2.5-1.8-37 gm

Jungle-like growth of dry stream bed.

819 Thalerophis m. mexicanus (coll. C. Koford)

19 Apr.

820 ♂ Troglodytes musculus test. 6 mm 10½ gm

Leafless oak, arid shrubby hillside.

821 ♀ Caprimulgus largest ovum 2 mm 45 gm

Arid scrub forest, dense understory

822 ♂ Caprimulgus test. l. 7 mm - rt. 11 mm 47.5 gm

Arid scrub forest, dense understory

823 ♀ Caprimulgus largest ovum 1 mm 47.5 gm

Arid scrub forest, dense understory

824 ♂ Xiphocolaptes emigrans test. 11 mm 123 gm

Close to ground, trunk of large oak, open mixed woods.

20 Apr.

825 Bufo coccifer

826 Anolis sp?

827 " "

828 Sceloporus v. variabilis

829 Sceloporus " "

830 Sceloporus teapensis

831 ♀ Campylorhincus zonatus ova not enlarged 32.5 gm

832 ♂ " " test. 8 mm 38.5 gm

833 ♂ Piranga flava test. 12 mm 41.5 gm.

In pine in open pine woods

834 ♀ Xiphocolaptes emigrans largest ovum 1 mm 111.5 gm

fragments 835 ~~Gerrhonotus~~ Abronia madudai taken from stomach of hawk

W. Riemer
1950

Catalogue

23 Apr. Mexico: Oaxaca: Totolapan

836 Elaphe chlorosoma 108 cm

23 Apr. Mexico: Oaxaca: 6 mi. E Oaxaca, Santa Lucia

837 Sceloporus spinosus caeruleopunctatus

24 Apr. Mexico: Oaxaca: 25 mi. NE Oaxaca, 6200 ft., Ixtlan (coll. C. Koford)

838 ♀ Ptiligonys largest ovum 1 mm (coll. C. Koford) 31.0 gm

839 ♀ " largest ovum 2 mm 32.0 gm

840 Sceloporus jarrovii immucronatus

25 Apr. Mexico: Oaxaca:

841 ♂ Certhia test. 2 mm 7.5 gm

Trunk of oak, dense oak forest, steep slope

842 ♀ Certhia ova not enlarged 7.0 gm

Trunk of oak, dense oak forest, steep slope

26 Apr. Mexico: Mexico: 18 mi. ESE Mexico City

843 Pituophis d. deppei

28 Apr. Mexico: Guerrero: 3 mi. W Omiltemi, 8200 ft.

844 ♀ Peromyscus 200-110-23-21 mm 27.5 gm

845 ♀ Troglodytes largest ovum 4 mm 16.5 gm

846 ♀ Cyanocitta stelleri largest ovum 1 mm 103.0 gm

847 Abronia deppii

848 " "

849 ~~Gerrhonotus~~ Barisia g. gadovii

850 Sceloporus formosus scitulus

851 Eleutherodactylus saltator

852 " "

853 Thorius sp?

854 " "

855 " "

W. Riemer
1950

Catalogue

29 Apr. Mexico: Guerrero: 3 mi. W Omiltemi, 8200 ft.

856 ♂ juv. Certhia test. < 1 mm 8.5 gm
Feeding on trunk of burnt stump, steep slope, mixed woods.

857 ♂ Wilsonia test. 1 mm 8.0 gm
Feeding in slash waste, steep slopes, mixed pine-oak woods.

858 ♀ Myioborus ova < 1 mm 8.5 gm
In flock of 6-8, feeding in trees and bushes, steep slopes, mixed woods.

859 ♀ Atlapetes largest ovum 2 mm 31.5 gm
Feeding in group of 4 on ground in dense understory, steep slope, mixed pine-oak forest.

860 ♂ Cyanositta stelleri test. 10 mm 103.5 gm

861 ~~Gerrhonotus~~ Barisia g. gadovii (coll. F. Pitelka)

30 Apr.

862 Sceloporus g. grammicus

863 " " "

864 " " "

865 " " "

866 Eumeces brevirostris

867 ♀ Neotoma no emb. 308-170-30-28 mm 60 gm
Near rivulet, dense damp broadleaf forest. Little understory.

30 Apr. Mexico: Guerrero: Omiltemi, 7500 ft. ±

868 Abronia deppii

869 ? Hylidae larvae
Stream and pools, canyon bottom, dense broadleaf forest, steep slopes.

W. Riemer
1950

Catalogue

30 Apr. Mexico: Guerrero: 3 mi. W Omilteme, 8200 ft.

870 ♂ Cyanolyca test. 6 mm 54.0 gm

1 May Mexico: Guerrero: 3 mi. W Omilteme, 8200 ft.

871 ♀ Neotoma no emb. 307-165-32-28 mm 62.5 gm

Near streamlet in dense broadleaf forest, under log.

872 ♀ Neotoma no emb. 235-122-28-23 mm 40.5 gm

Near streamlet in dense broadleaf forest, under log.

873 Thamnophis scalaris godmani (coll. F. Pitelka)

874 " " " (")

875 Anolis dunni (what is difference in elevation of type locality & collᵍ locality)

876 Eleutherodactylus saltator

877 " "

878 " "

879 " "

880 " "

881 Thorius sp?

2 May

882 ♀ Neotoma no emb. 250-129-27-23 49.5 gm

883 ~~Gerrhonotus~~ Barisia g. gadovii

2 May Mexico: Guerrero: Omilteme, 7500 ft ±

884 Sceloporus mucronatus omiltemanus

885 " " "

2 May Mexico: Guerrero: Chilpancingo

886 Sceloporus h. horridus

2 May Mexico: Guerrero: 10 mi. S Chilpancingo

887 Oxybelis acuminatus

3 May Mexico: Guerrero: 40 km NE Acapulco, El Cuarenta

888 Lampropeltis triangulum blanchardi

W. Riemer
1950

Catalogue

3 May Mexico: Guerrero: 4 mi. S Tierra Colorada

889 *Ctenosaura pectinata*

6 May Mexico: Nuevo Leon: 20 mi. S Monterrey, Cola de Caballo (falls)

890 Hyla miotympanum

3 May Mexico: Guerrero: Acapulco

890 A Green turtle (skull)

W. Riemer
1950
1951

Catalogue

21 May Calif.: Sonoma Co., 2½ mi S Glen Ellen, 550 ft.

891 Triturus granulosus

892 " "

Both taken in small pool in tiny stream (almost dry). Steep pitch, redwood forest, dense growth, well shaded.

15 Aug. Calif.: Alameda Co., Berkeley, Berkeley Hills

893 Coluber lateralis (coll. Archie Mossman)

23 Sept. Calif.: Contra Costa Co., Lafayette Reservoir

894 Thamnophis elegans atratus near water of lake in willow thicket. Disgorged two ~~newly~~ metamorphosed Triturus larvae

14 Oct. Calif.: Contra Costa Co., Lafayette Reservoir

895 Triturus torosus } preserved immediately for

896 " " } food contents and gonad development

23 Oct Calif.: Contra Costa Co., Pinehurst

897 Triturus torosus } just emerged with

898 " " } first fall rain. Check

899 " " } for stomach contents

900 " " } and gonad develop-

901 " " } ment.

1951 17 Feb. Calif.: Contra Costa Co., Lafayette Reservoir

902 Triturus torosus juv.

Apparently just metamorphosed; gill stubs still present, skin soft and ~~~~ smooth rather than granular. Weak. Abnormal?

W. Riemer
1951

Catalogue

4 Mar. Calif.: Sonoma Co., Skaggs Springs

903 Aneides lugubris

904 " "

905 " "

906 " "

Taken under wet bark of fallen, not yet rotted, logs.

907 Aneides flavipunctatus

908 " "

909 " "

910 " "

Two small juv. under bark with *lugubris*, (above), adult and subadult under wet rocks at base of road bank.

911 Sceloporus occidentalis

912 " "

Lethargic, under bark with *lugubris* and *flavipunctatus*.

913 Triturus rivularis

914 " "

915 " "

916 " "

917 " "

918 " "

919 " "

920 " "

921 " "

W. Riemer
1951

Catalogue

4 Mar. Calif.: Sonoma Co., between Skaggs Springs and Stewarts Point

922 Triturus rivularis } Taken on road at dusk. For student collection.
923 " "
924 " "
925 " "

18 Mar. Calif.: San Mateo Co., 2.3 mi. W San Bruno, State Hwy 5

926 Triturus granulosus
926A " "
927 " "
928 " "
929 " "
930 " " (3 larvae) not preserved

18 Mar. Calif.: San Mateo Co., 1 mi. N, ½ mi. E La Honda

931 Triturus torosus
In rotten log, redwood, Doug. fir forest.

15 Apr. Calif.: Contra Costa Co., 1¾ mi E., ½ mi. N Mt. Diablo, Marsh Creek Springs Park

932 Thamnophis elegans atratus

20 May Calif.: Sonoma Co., Skaggs Springs

933 Triturus granulosus
934 " "
935 " "
936 " "
937 " "
938 " "

W. Riemer
1951

Catalogue

20 May Calif.: Mendocino Co., 4 mi. SW Ukiah, Robinson Creek

939 Triturus granulosus

940 " "

941 Triturus rivularis (larvae)

942 Diadophis amabilis

20 May Calif.: Mendocino Co., 8 mi. WSW Willets

943 Triturus granulosus

944 Ensatina eschscholtzii

945 Batrachoseps attenuatus

20 May Calif.: Mendocino Co., 6 mi. WSW Willets

946 Ensatina eschscholtzii

947 " "

948 " "

949 " "

950 Thamnophis elegans

27 May Calif.: Santa Cruz Co., San Lorenzo River, Boulder Creek (town)

951 Rana boylii - given to R. Zweifel

9 June Calif.: Contra Costa Co., Lafayette Reservoir

952 Triturus torosus (larvae)

13 July Calif.: Monterey Co., ~~Asilomar~~ 1½ mi. W Pacific Grove, Moss Beach

953 Batrachoseps attenuatus

12 Aug. Calif.: Marin Co., Cataract Canyon, 1½ mi. SSE Alpine Lake Dam

954 Dicamptodon ensatus (larvae)

955 " " " died - not preserved

956 " " " " " "

W. Riemer
1951

Catalogue

12 Aug. Calif.: Marin Co., Cataract Canyon, 1½ mi. SSE Alpine Lake Dam

957 Dicamptodon ensatus (larva) died - not preserved

18 Aug. Calif.: Sonoma Co., 1 mi. W, ½ mi. N Skaggs Springs, Warm Springs Creek.

958 Triturus granulosus

959 " "

960 " "

961 " "

962 Triturus rivularis - post larval

~~963 Clemmys marmorata~~ See 2 Sept. 1951 catalogue

964 Thamnophis elegans aquaticus

18 Aug. Calif.: Mendocino Co., Robinson Creek, 4 mi. S, 1 mi. W Ukiah

965 Triturus rivularis metamorphosed in captivity

966 " " " " "

967 " " " " "

968 " " " " "

969 " " " " "

970 " " " " "

971 " " " " "

972 " " " " "

973 " " " " "

974 " " " " "

975 " " " " "

976 " " " " "

977 " " " " "

978 " " " " "

979 " " " " "

980 " " " " "

died in captivity

W. Riemer
1951

Catalogue

18 Aug. Calif.: Mendocino Co., Robinson Creek, 4 mi. S, 1 mi. W Ukiah

981 Triturus rivularis ↑ metamorphosed in captivity
982 " " died in captivity " " "
983 " " " " "

19 Aug. Calif.: Mendocino Co. 5½ mi. N, 4¼ mi. E Comptche, juncture of James Creek with North Fork of Big River

984 Triturus granulosus

19 Aug. Calif.: Mendocino Co., Van Damme State Park, 2 mi. S, 2½ mi. E Mendocino

985 Triturus granulosus
986 Rana aurora
987 " "
988 " "

2 Sept. Calif.: Tuolumne Co., Soulsbyville, Curtis Creek

963 Clemmys marmorata

2 Sept. Calif.: Tuolumne Co., Woods Creek, 1½ mi. SE Columbia

989 3 Triturus sierrae – larvae

9 Sept Calif.: Marin Co., Paper Mill Creek, Samuel P. Taylor State Park

990 7 Triturus granulosus – larvae
991 Triturus granulosus
992 " "

20 Oct. Calif.: Napa Co., Robert Louis Stevenson Home, 2 mi. E, 1 mi. S Mt. St. Helena

993 Aneides lugubris
994 Aneides flavipunctatus
995 " "
996 Ensatina eschscholtzia

W. Riemer
1951

Catalogue

20 Oct. Calif.: Napa Co., Robert Louis Stevenson Home, 2 mi E, 1 mi. S, Mt. St. Helena

997 Ensatina eschscholtzia
998 " "

20 Oct. Calif.: Napa Co., 3½ mi. E, ½ mi. S Mt. St. Helena

999 Triturus granulosus
1000 " "
1001 " "
1002 " "
1003 " "
1004 " "
1005 " "
1006 " "
1007 " "
1008 " "
1009 " "
1010 " "
1011 " "
1012 " "
1013 " "
1014 " "
1015 " "
1016 " "
1017 " "
1018 " "
1019 " "
1020 " "
1021 " "

W. Riemer
1951

Catalogue

20 Oct. Calif.: Napa Co., 3½ mi. E, ½ mi. S Mt. St. Helena

1022 Triturus granulosus

1023 " "

1024 " "

1025 " "

1026 " "

1027 " "

20 Oct. Calif.: Sonoma Co., 5½ mi. W, 1 mi. S Skaggs Springs

1028 Eumeces skiltonianus

1029 " "

W. Riemer
1952

Catalogue

31 Jan. See # 1197

3 Feb. Calif.: Mendocino Co., Robinson Creek, 4 mi. S, 1½ mi. W Ukiah

1030 Triturus rivularis
1031 " "
1032 Aneides flavipunctatus
1033 " " – student collection
1034 " "
1035 Aneides lugubris
1036 Batrachoseps attenuatus
1037 " " (lost)
1038 " "

3 Feb. Calif.: Mendocino Co., 9.4 mi. SSE Willets

1039 Triturus granulosus
1040 " "
1041 " " ♀ died - destroyed
1042 Batrachoseps attenuatus
1043 Aneides lugubris – student collection
1044 " "
1045 " "
1046 " "
1047 " "
1048 " "
1049 Rana boylii

3 Feb. Calif.: Mendocino Co., 3.1 mi. S Laytonville

1050 Aneides lugubris
1051 Ensatina eschscholtzii
1052 " " – to Nate Cohen

3 Feb. Calif.: Humboldt Co., 5.6 mi. N Garberville

1053 Aneides lugubris

W. Riemer
1952

Catalogue

3 Feb. Calif.: Humboldt Co., 5.6 mi. N Garberville

1054 Aneides lugubris
1055 Aneides flavipunctatus
1056 " "
1057 " "
1058 " "
1059 " "
1060 " "
1061 " " (not catalogued)
1062 " "
1063 " "
1064 Batrachoseps attenuatus
1065 " "

4 Feb. Calif.: Humboldt Co., 4 mi. N Orick

1066 Ensatina eschscholtzii

5 Feb. Calif.: Del Norte Co., 2¼ mi. N, 6½ mi. E Crescent City

1067 Rana boylii
1068 Plethodon elongatus
1069 " "
1070 " "

5 Feb. Calif.: Del Norte Co., 2¼ mi. E, 2¼ mi. S Fort Dick, ~~Del Norte Co., Calif.~~

1071 Plethodon elongatus
1072 " "
1073 ~~" "~~ (lost)
1074 ~~" "~~ "
1075 " "
1076 " "

W. Riemer
1952

Catalogue

5 Feb. Calif.: Del Norte Co., 2¼ mi E, 2¼ mi. S Fort Dick

1077 ~~Plethodon elongatus~~ (lost)
1078 " "
1079 " "
1080 ~~" "~~ (lost)
1081 " "
1082 " "
1083 " "
1084 " "
1085 " "
1086 " "
1087 " "
1088 Ensatina eschscholtzii
1089 " "
1090 " "
1091 " "
1092 " "
1093 Aneides ferreus
1094 " "
1095 ~~" "~~ (lost)
1096 ~~Batrachoseps attenuatus~~ "
1097 ~~" "~~ "
1098 ~~" "~~ "
1099 ~~" "~~ "
1100 ~~" "~~ "
1101 ~~" "~~ (lost)
1102 ~~Hyla regilla~~ "
1103 ~~" "~~ "

W. Reimer
1952

Catalogue

5 Feb. Calif.: Del Norte Co., 2¼ mi. E, 2¼ mi. S Fort Dick ~~Crescent City~~

1104 ~~Hyla regilla~~ (lost)

1105 Gerrhonotus coeruleus

5 Feb. Calif.: Del Norte Co., ½ mi. E, ½ mi. N Fort Dick

1106 Rana aurora

5 Feb. Oregon: Curry Co., 11.2 mi. S Carpenterville

1107 Plethodon dunni

1108 " "

1109 " "

5 Feb. Oregon: Curry Co., 1.4 mi. SSE Carpenterville

1110 Triturus granulosus

1111 " "

5 Feb. Oregon: Curry Co., 2.7 mi. S Pistol River (town) ~~5.4 mi. NNW Carpenterville~~

1112 Triturus granulosus

1113 " "

1114 " "

1115 " "

6 Feb. Oregon: Coos Co., 2.6 mi. SW Coquille

1116 Plethodon vehiculum

6 Feb. Oregon: Coos Co., 4.1 mi. NNE North Bend

1117 Triturus granulosus

1118 ~~Rhyacotriton olympicus (larvae)~~ (lost)

6 Feb. Oregon: Douglas Co., 11.1 mi. E Reedsport

1119 Plethodon dunni

1120 " " – to Nate Cohen

1121 " "

1122 " "

1123 ~~" "~~ (lost)

W. Riemer
1952

Catalogue

6 Feb. Oregon: Douglas Co., 11.1 mi. E Reedsport

1124 ~~Plethodon dunni~~ (lost)

1125 " "

1126 " "

1127 " "

1128 ~~Plethodon vehiculum~~ (lost)

1129 Rhyacotriton olympicus

6 Feb. Oregon: Douglas Co., 8.6 mi. E Reedsport

1130 Triturus granulosus

1131 " "

1132 " "

1133 " "

1134 " "

1135 " "

1136 No specimen - number inadvertently skipped.

7 Feb. Oregon: Curry Co., 0.6 mi. N Langlois

1137 Triturus granulosus

1138 " "

1139 " "

1140 " "

1141 " "

1142 " "

1143 " "

1144 Rana aurora

1145 " "

7 Feb. Oregon: Coos Co., 3.5 mi. SW Coquille

1146 Rhyacotriton olympicus

1147 " "

1148 Plethodon dunni

W. Riemer
1952

Catalogue

7 Feb. Oregon: Coos Co., 2.6 mi. SW Coquille

1149 Plethodon dunni

1150 " + vehiculum

1151 " "

1152 Plethodon vehiculum – to Nate Cohen

1153 Rhyacotriton olympicus

7 Feb. Oregon: Curry Co., 2 mi. N Ophir

1154 Triturus granulosus

1155 " "

1156 " "

1157 " "

1158 " "

1159 " "

1160 " "

1161 " "

1162 " "

1163 " "

1164 " "

1165 " "

1166 " "

1167 " "

1168 " "

1169 " "

1170 " "

1171 " "

1172 " "

1173 " "

1174 " "

W. Riemer
1952

Catalogue

7 Feb. Oregon: Curry Co., 2 mi. N Ophir

1175 Triturus granulosus

1176 " "

1177 " "

1178 " "

1179 " "

1180 ~~" "~~ (lost)

1181 ~~" "~~ "

1182 " "

1183 " "

1184 " "

1185 " "

1186 " "

1187 " "

1188 " "

7 Feb. Oregon: Curry Co., 7.5 mi N Pistol River (town)

1189 Plethodon dunni

1190 " "

1191 ~~Plethodon elongatus~~ (lost)

1192 " "

1193 Rhyacotriton olympicus

1194 " "

8 Feb. Calif: Humboldt Co., 1 mi. SE Big Lagoon, tributary Maple Creek.

1195 Rhyacotriton olympicus — student collection

1196 Dicamptodon ensatus (larva) - student collection

31 Jan. Oregon: Benton Co., 7 mi. N Corvallis

1197 Triturus granulosus

1198 " "

W. Riemer
1952

Catalogue

31 Jan. Oregon: Benton Co., 7 mi. N Corvallis

1199 Triturus granulosus
1200 " "
1201 " "
1202 " "
1203 " "
1204 " "
1205 " "
1206 " "
1207 " "
1208 " "

13 Feb. Calif.: San Mateo Co., 1/4 mi W, 1/4 mi. N Searsville Lake Dam

1209 Triturus torosus

13 Feb. Calif.: San Mateo Co., 2 mi. S Woodside

1210 Triturus torosus
1211 " "
1212 Ensatina eschscholtzii
1213 " "

13 Feb. Calif.: San Mateo Co., San Mateo County Memorial Park, 1 1/4 mi. N, 5 mi. E Pescadero

1214 Triturus torosus
1215 Ensatina eschscholtzii

13 Feb. Calif.: San Mateo Co., 2 1/2 mi. W San Bruno

1216 Triturus granulosus
1217 " "
1218 " "
1219 " "
1220 " "

W. Riemer
1952

Catalogue

13 Feb. Calif.: San Mateo Co., 2½ mi. W San Bruno
1221 Triturus granulosus
1222 Batrachoseps attenuatus
1223 " "
17 Feb. Calif.: ~~Alameda~~ Contra Costa Co., 1¾ mi. N, 1½ mi. E Moraga
1224 Ensatina eschscholtzii
(collector M. Larsen)
23 Feb. Calif.: Marin Co., 0.4 mi. E, 0.1 mi. N Dillon Beach
1225 Triturus granulosus (7 larvae)
2 Mar. Calif.: Butte Co., 1¾ mi. E, 2¼ mi. S Bidwell Bar
1226 Sceloporus occidentalis
2 Mar. Calif.: Butte Co., ¾ mi. W, 2¾ mi. S Bidwell Bar
1227 Gerrhonotus multicarinatus
2 Mar. Calif.: Butte Co., 2¾ mi. W, 6 mi. N Bangor
1228 Rana catesbeiana (larva)
1229 " " "
1230 " " "
1231 " " "
2 Mar. Calif.: Yuba Co., 5.4 mi. E, 4.0 mi. N Bangor, South Honcut Creek
1232 Triturus sierrae
30 Mar. Calif.: Marin Co., 1 mi. E, 4 mi. S Mt. Tamalpais (West Peak), Frank Valley
1233 Triturus granulosus
1234 Rana boylii
30 Mar. Calif.: Marin Co., ¾ mi. E, 1½ mi. S Olema
1235 Triturus granulosus
5 Apr. Calif.: Alameda Co., 5 mi. E, 1¼ mi. S Mission San Jose
1236 Crotalus ~~oreganus~~ viridis

W. Riemer
1952

Catalogue

5 Apr. Calif.: Alameda Co., 4 3/4 mi. E, 2 mi. S Mission San Jose

1237 Gerrhonotus multicarinatus – (lost)

5 Apr. Calif.: Alameda Co., 2 mi. W, 5 1/4 mi. S Midway, Corral Hollow

1238 Crotalus viridis

5 Apr. Calif.: Alameda Co., 1 3/4 mi. W, 2 mi. N Cedar Mt., Arroyo Mocho, 1500 feet.

1239 Diadophis amabilis

1240 Bufo boreas

1241 Triturus torosus

1242 " "

1243 " "

1244 " "

1245 " "

1246 " " (7 post-larval)

29 Mar. Calif.: Mendocino Co., 4 mi. S, 1 1/2 mi. W Ukiah, Robinson Creek

1247 Triturus rivularis (collected by R. C. Stebbins)

6 Apr. Calif.: Mendocino Co., 2 3/4 mi. E, 2 3/4 mi. N Hopland

1248 Triturus torosus (collected by M. Larson)

1249 " " "

1250 " " "

12 Apr. Calif.: Santa Cruz Co., Waddell Creek, 3 1/4 mi. E Ano Nuevo Point, 25 feet.

1251 Triturus torosus

1252 " "

1253 " "

1254 " "

W. Riemer
1952

Catalogue

12 Apr. Calif.: Santa Cruz Co., Waddell Creek, 3¼ mi. E Ano Nuevo Point, 25 feet.

1255 Triturus torosus
1256 " "
1257 " "
1258 " "
1259 " "
1260 " "
1261 " "
1262 " "
1263 " "
1264 " "
1265 " "
1266 " "
1267 " "
1268 " "
1269 " "
1270 " "
1271 " "
1272 " "
1273 " "
1274 " "
1275 " "
1276 " "
1277 " "
1278 " "
1279 Triturus granulosus
1280 " "

W. Riemer
1952

Catalogue

12 Apr. Calif.: Santa Cruz Co., Waddell Creek, 3¼ mi. E Ano Nuevo Point, 25 ft.

1281 Triturus granulosus
1282 " "
1283 " "
1284 " "

28 Apr. Calif.: Calaveras Co., 1 mi. E Vallecito, 1800 ft.

1285 Bufo boreas (larvae) one group for Student Collect.

28 Apr. Calif.: Calaveras Co., Vallecito, 1700 ft.

1286 Rana boylii
1287 Rana catesbeiana (larva)

26 Apr. Calif.: ~~Tulare Co.~~ Fresno Co., 11 mi. E, 2 mi. N Squaw Valley (town), State Hwy 180, 5000 ft.

1288 Triturus sierrae (coll. R. Zweifel)
1289 " " (coll. K. Murray)
1290 " " "
1291 " " "
1292 " " "
1293 " " "

27 Apr. Calif.: Tulare Co., 9 mi. E, 4½ mi. N Springville, Camp Wishon

1294 Triturus sierrae (coll. R. Zweifel)
1295 " " "
1296 " " "
1297 " " "
1298 " " "
1299 " " "
1300 " " "

W. Riemer
1952

Catalogue

27 Apr. Calif.: Tulare Co., 9 mi. E, 4½ mi. N Springville, Camp Wishon

1301 Triturus sierrae (coll. R. Zweifel)

1302 " " "

1303 " " "

1304 " " "

1305 " " "

3 May Calif.: Santa Cruz Co., 1¾ mi. E, 1½ mi. N Boulder Creek (town), Bear Creek, 650 ft.

1306 Triturus ~~torosus~~ ~~granulosus~~ torosus

22 May Oregon: Benton Co., 7 mi. N Corvallis

1307 Triturus granulosus (collected by R. Pimentel)

1308 " "

1309 " "

1310 " "

1311 " "

1312 " "

1313 " "

30 May Calif.: Butte Co., Butte Meadows

1314 ~~Gerrhonotus~~ coeruleus died - not cataloged

1315 " "

1316 " "

1317 Triturus sierrae

1318 Sceloporus graciosus

31 May Calif.: Plumas Co., Seneca

1319 Triturus sierrae

1320 " "

1321 " "

1322 " "

W. Riemer
1952

Catalogue

31 May Calif.: Plumas Co., Seneca

1323 Triturus sierrae
1324 " "
1325 " "
1326 " "
1327 " "
1328 " "
1329 " "
1330 " "
1331 Triturus sierrae (eggs)
1332 Thamnophis elegans
1333 ~~" "~~ (lost)
1334 ~~" "~~ (lost)

31 May Calif.: Plumas Co., Greenville

1335 Ambystoma macrodactylum (larvae)

31 May Calif.: Plumas Co., 5½ mi. W McKenzie Peak, Last Chance Creek

1336 ~~Sceloporus graciosus~~ died

1 June Calif.: Eldorado Co., 1 mi. W Kyburz

1337 ~~Coluber constrictor~~ lost.

1 June Calif.: Eldorado Co., 2¼ mi. WSW Placerville, Webber Creek

1338 Clemmys marmorata

29 June Calif.: Contra Costa Co., Tilden Regional Park, Jewel Lake

1339 Triturus granulosus

28 June Calif.: Contra Costa Co., Canyon (town)

1340 Triturus torosus

W. Riemer
1952

Catalogue

13 July Calif.: Marin Co., 4 mi. NW Fairfax

1341	Triturus granulosus	collected by S.F. Cook, Jr.
1342	" "	
1343	" "	
1344	" "	
1345	" "	

23 June Calif.: San Diégo Co., 7½ mi NNW Descanso, Boulder Creek, 2500 ft.

1346	Triturus torosus	collected by R. Zweifel
1347	" "	
1348	" "	
1349	" "	
1350	" "	
1351	" "	
1352	" "	
1353	" "	

26 July Calif.: Marin Co., 1½ mi. E San Geronimo, San Geronimo Creek, 425 ft.

1354 Triturus granulosus
1355 " " (larvae (10))
1356 Rana boylii
1357 " "
1358 " " (larva (1))
1359 Hyla regilla (larvae) 19

2 Aug. Calif.: Contra Costa Co., Pinehurst

1360 Triturus torosus (larvae) 10

2 Aug. Calif.: Contra Costa Co., Lafayette Reservoir

1361 Rana aurora (larva)
1362 Hyla regilla (larvae, 2)

W. Riemer
1952
1953

Catalogue

9 Aug. Calif.: Contra Costa Co., Tilden Regional Park, Jewel Lake

1363 Triturus granulosus
1364 " "
1365 " "
1366 " "
1367 " "

30 Aug Calif.: Contra Costa Co., ~~Lafayette Reservoir~~ Pinehurst

1368 Triturus torosus (10 larvae) (killed few hours after capture)

30 Aug. Calif.: Contra Costa Co. Lafayette Reservoir

1369 " "
1370 " "
1371 " "
1372 " "
1373 " "
1374 " "
1375 " "
1376 " "
1377 " "
1378 " "
1379 " "

4 Oct. Calif.: Contra Costa Co., Pinehurst

1380 Triturus torosus (10 larvae) (killed few hours after capture)

15 Oct. Calif.: Contra Costa Co., Vaca Canyon, 3 mi S, 1½ mi W. Martinez

† 1381 Triturus torosus (large series larvae and metamorphosing young)

8 Nov. Calif.: Contra Costa Co., Lafayette Reservoir

1382 Triturus torosus (3 post-larval young)

* 24 Jan. Calif.: Contra Costa Co., Lafayette Reservoir

1383 Triturus torosus (terrestrial)
1384 " " "

* See 1459; 1464; 1469; 1636 † See 1470

W. Riemer
1953

Catalogue

24 Jan. Calif.: Contra Costa Co., Lafayette Reservoir

1385	Triturus	torosus	(terrestrial)
1386	"	"	(taken from water)
1387	"	"	(terrestrial)
1388	"	"	"
1389	"	"	"
1390	"	"	"
1391	"	"	(aquatic)
1392	"	"	"
1393	"	"	"
1394	"	"	"
1395	"	"	"
1396	"	"	"
1397	"	"	"
1398	"	"	"

29 Jan. Calif.: Contra Costa Co., Tilden Regional Park, Jewel Lake

1399	Triturus	torosus	(terrestrial)
1400	"	"	"
1401	"	"	"
1402	"	"	"
1403	"	"	"
1404	"	"	"
1405	"	"	"
1406	"	"	"
1407	"	"	"
1408	"	"	"
1409	"	"	"
1410	"	"	"

W. Riemer
1953

Catalogue

29 Jan. Calif.: Contra Costa Co., Tilden Regional Park, Jewel Lake

1411 Triturus torosus (terrestrial)
1412 " " "
1413 " " "
1414 Triturus granulosus "
1415 " " "
1416 " " "

1 Feb. Calif.: Napa Co., 9½ mi. NNW Monticello, Eticura Creek

1417 Triturus torosus (terrestrial)
1418 " " "

1 Feb. Calif.: Yolo Co., Putah Creek, 1½ mi. E Yolo, Napa, Solano Co. lines junction.

1419 Triturus torosus (terrestrial)
1420 " " (aquatic)

5 Feb. Calif.: Sonoma Co., Wild Cattle Creek, ½ mi. S, 4½ mi. W Skaggs Springs, 800 ft.

1421 Triturus rivularis (terrestrial)
1422 " " "
1423 " " "
1424 " " "
1425 " " "
1426 " " "
1427 " " "
1428 " " "
1429 " " "
1430 " " "
1431 " " "
1432 " " "

W. Riemer
1953

Catalogue

5 Feb. Calif.: Sonoma Co, Wild Cattle Creek, ½ mi. S, 4½ mi. W Skaggs Springs, 800 ft.

1433 Triturus rivularis (terrestrial)
1434 " " "
1435 " " "
1436 " " "
1437 " " "
1438 " " "
1439 " " "
1440 " " "
1441 " " "
1442 " " "
1443 " " "
1444 " " "
1445 " " "
1446 " " "
1447 " " "
1448 " " "
1449 " " "
1450 " " "
1451 " " "
1452 " " "
1453 " " " (series of 48) one poor skeleton discarded
1454 Triturus granulosus (terrestrial)
1455 " " "
1456 " " "
1457 " " "
1458 " " "

W. Riemer
1953

Catalogue

12 Nov. (1952) Calif.: Contra Costa Co., Alamo

1459 Masticophis lateralis (collector Tim Huff)

5 Feb. Calif.: Sonoma Co., Wolf Creek, 1 mi. S, 9½ mi. W Skaggs Springs

1460 Triturus rivularis (terrestrial)

1461 " " "

5 Feb. Calif.: Sonoma Co., Warm Springs Creek, 1½ mi. N, 1 mi. E Skaggs Springs

1462 Triturus rivularis (terrestrial)

6 Feb. Calif.: Contra Costa Co., Tilden Regional Park, Lake Anza

1463 Triturus torosus (terrestrial) (coll. G. Rosenthal)

15 Nov. (1952) Calif.: Mariposa Co., ½ mi. NE Briceburg,

1464 Triturus sierrae (terrestrial) (J. Gorman, coll.)

1465 " " " "

1466 " " " "

1467 " " " "

Jan. ? ('53) Calif.: Contra Costa Co., Tilden Regional Park

1468 Lampropeltis getulus californiae (skeleton)

12 Nov. (1952) Calif.: Contra Costa Co., Tilden Regional Park, 1¼ mi. E Lake Anza

1469 Triturus granulosus

24 Oct. (1952) Calif.: Los Angeles Co., San Gabriel Mts, Upper Arroyo Seco, Switzer Public Camp (coll. R. Zweifel)

1470 Triturus torosus (larva)

15 Feb. Calif.: Napa Co., 4 mi. N, 1½ mi. W Calistoga

1471 Diadophis amabilis

1472 " "

1473 " "

1474 Gerrhonotus multicarinatus (skeleton)

1475 " " "

W. Riemer
1953

Catalogue

15 Feb. Calif: Napa Co., 4 mi. N, 1½ mi. W Calistoga

1476 Gerrhonotus multicarinatus (skeleton)
1477 " "

15 Feb. Calif: Napa Co., 3½ mi. E, ½ mi. S Mt. St. Helena

1478 Rana catesbeiana (larva)
1479 " " "
1480 " " "
1481 " " "
1482 " " (series of small larvae)
1483 Triturus granulosus (aquatic)
1484 " " "
1485 " " "
1486 " " "
1487 " " "
1488 " " "
1489 " " "
1490 " " "
1491 " " "
1492 " " "

21 Feb. Calif.: Contra Costa Co. Lafayette Reservoir

1493 Triturus torosus
1494 " "
1495 " "
1496 " "
1497 " "
1498 " "
1499 " "
1500 " "

W. Riemer
1953

Catalogue

21 Feb. Calif.: Contra Costa Co., Lafayette Reservoir
1501 Triturus torosus
1502 " "
21 Feb. Calif.: Contra Costa Co., ½ mi. S Moraga
1503 Triturus Torosus (aquatic)
1504 " " " (sent to A.P. Blair)
22 Feb. Calif.: San Benito Co., 8 mi. W Panoche
1505 Scaloporus occidentalis
1506 Gerrhonotus multicarinatus (coll. J. Klotz)
22 Feb. Calif.: San Benito Co., 4 mi. S, 1 mi. W Pinnacles (town)
1507 Aneides lugubris
1508 Anniella pulchra
23 Feb. Calif.: San Benito Co., 3 mi. S Pinnacles (town).
1509 Aneides lugubris
1510 " "
1511 " "
1512 Ensatina eschscholtzii
23 Feb. Calif.: Santa Clara Co., 4 mi. S, 1½ mi. E Coyote Reservoir Dam
1513 Triturus torosus (terrestrial)
1514 " " (aquatic)
23 Feb. Calif.: Santa Clara Co., Coyote Creek, 3 mi. S, 2½ mi. E Coyote Reservoir Dam
1515 Bufo boreas
1516 Triturus torosus (terrestrial)
1517 " " "
1518 " " (aquatic)

W. Riemer
1953

Catalogue

23 Feb. Calif.: Santa Clara Co., Coyote Creek, 3 mi. S, 2½ mi. E Coyote Reservoir Dam.

1519 Triturus torosus (aquatic)
1520 " " "
1521 " " "
1522 " " "
1523 " " "
1524 " " "
1525 " " "
1526 " " "
1527 " " "
1528 " " "
1529 " " "

1 Mar. Calif.: Alameda Co., Arroyo Mocho, 8 mi. S, 4½ mi. W Midway, 1500 ft.

1530 Triturus torosus (terrestrial)
1531 " " "
1532 " " (aquatic)
1533 " " "
1534 " " "
1535 " " "
1536 " " "
1537 " " "
1538 " " "
1539 " " "
1540 " " "
1541 " " "
1542 " " "

W. Riemer
1953

Catalogue

1 Mar. Calif.: Alameda Co., Arroyo Mocho, 8 mi. S, 4½ mi. W Midway, 1500 ft.

1543 Hyla regilla
1544 " "
1545 " "
1546 " "
1547 " "
1548 " "

1 Mar. Calif.: Alameda Co., Arroyo Mocho, 1 mi. S Mt. Wallace, 2250 ft.

1549 Triturus torosus (terrestrial)

7 Mar. Calif.: Contra Costa Co., ½ mi. S Moraga

1550 Triturus torosus (aquatic)

7 Mar. Calif.: Contra Costa Co., Tilden Regional Park, Jewel Lake

1551 Triturus torosus
1552 " " (sent to A.P. Blair)
1553 " " " " " "
1554 " "
1555 " "
1556 " granulosus
1557 " "

8 Mar. Calif.: Mendocino Co., 1½ mi. S, 8 mi. Yorkville

1558 Diadophis amabilis

8 Mar. Calif.: Mendocino Co., Rancheria Creek, 1½ mi. W, ½ mi. N Yorkville

1559 Triturus rivularis (aquatic)
1560 " " (")
1561 " " "

W. Riemer
1953

Catalogue

8 Mar. Calif.: Mendocino Co., Rancheria Creek, 1½ mi. W, ½ mi. N Yorkville

1562	Triturus	rivularis	(aquatic)
1563	"	"	"
1564	"	"	"
1565	"	"	"
1566	"	"	"
1567	"	"	"
1568	"	"	"
1569	"	"	"
1570	"	"	"
1571	"	"	"
1572	"	"	"
1573	"	"	"
1574	"	"	"
1575	"	"	"
1576	"	"	"
1577	"	"	"
1578	"	"	"
1579	"	"	"
1580	"	"	"
1581	"	"	"
1582	"	"	"
1583	"	"	"
1584	"	"	"
1585	"	"	"
1586	"	"	"
1587	"	"	"

W. Riemer
1953

Catalogue

8 Mar. Calif.: Mendocino Co., Rancheria Creek, 1½ mi. W, ½ mi. N Yorkville

1588	Triturus	rivularis	(terrestrial)
1589	Triturus	rivularis	(series for exchange)
1590	Triturus	granulosus	(aquatic)
1591	"	"	"
1592	"	"	"
1593	"	"	"
1594	"	"	"
1595	"	"	"
1596	"	"	"
1597	"	"	"
1598	"	"	"
1599	"	"	"
1600	"	"	"
1601	"	"	"
1602	"	"	"
1603	"	"	"
1604	"	"	"
1605	"	"	"
1606	"	"	"
1607	"	"	"
1608	"	"	"
1609	"	"	"
1610	"	"	"
1611	"	"	"
1612	"	"	"
1613	"	"	"
1614	"	"	"

W. Riemer
1953

Catalogue

8 Mar. Calif.: Mendocino Co., Rancheria Creek, 1½ mi. W, ½ mi. N Yorkville

1615 Triturus granulosus (aquatic)
1616 " " "
1617 " " "
1618 " " "
1619 " " "
1620 " " (series for exchange)

8 Mar. Calif.: Mendocino Co., Mill Creek, ½ mi. S, 4 mi. W Yorkville

1621 Triturus rivularis (aquatic)
1622 Triturus granulosus "
1623 " " "
1624 " " "
1625 " " "
1626 " " "
1627 " " "
1628 " " "

9 Mar. Calif.: Sonoma Co., Warm Springs Creek, ½ mi. N, 1 mi. W Skaggs Springs

1629 Triturus rivularis (aquatic)
1630 " " "
1631 Triturus granulosus (aquatic)
1632 " " "
1633 " " "
1634 " " "
1635 Rana boyli

13 Nov. 1952 Calif.: Marin Co., 1.5 mi. E Muir Woods Nat'l. Monument.

1636 Triturus torosus (coll. P. K. Anderson)

W. Reimer
1953

Catalogue

16 Mar. Calif.: Napa Co., Napa River, 1 mi. N, 3/4 mi. E Yountville

1637 Triturus torosus (terrestrial)
1638 " " "

16 Mar. Calif.: Napa Co., 1 1/4 mi. E Aetna Springs, 700 ft.

1639 Triturus torosus
1640 " "

16 Mar. Calif.: Napa Co., 1/2 mi. E Pope Valley (town), 700 ft.

1641 Triturus torosus (terrestrial)

16 Mar. Calif.: Napa Co., Pope Creek, 7 mi. E Pope Valley (town), 350 ft.

1642 Triturus torosus (terrestrial)
1643 " " (aquatic)
1644 " " "
1645 " " "
1646 " " "
1647 " " "
1648 " " "
1649 " " "
1650 " " "
1651 " " "
1652 " " "
1653 " " "
1654 " " "
1655 " " "
1656 " " "
1657 " " "
1658 " " "
1659 Triturus granulosus "

W. Riemer
1953

Catalogue

16 Mar. Calif.: Napa Co., Pope Creek, 7 mi. E Pope Valley (town), 350 ft.

1660 Triturus granulosus (aquatic)
1661 " " "

16 Mar. Calif.: Napa Co., Chiles Creek, 2 mi. S, 4 mi. E Angwin, 850 ft.

1662 Triturus granulosus (aquatic)
1663 " " "
1664 " " "
1665 " " "
1666 " " "
1667 " " "
1668 " " "
1669 " " "
1670 " " "
1671 " " "
1672 " " "
1673 " " "
1674 " " "

21 Mar. Calif.: Contra Costa Co., Lafayette Reservoir

1675 Triturus torosus
1676 " "
1677 " "
1678 " "
1679 " "

22 Mar. Calif.: Marin Co., Woodacre, 1½ mi. E San Geronimo, San Geronimo Creek, 425 ft.

1680 Aneides lugubris
1681 Rana boylei (given to R. Zweifel)

W. Riemer
1953

Catalogue

22 Mar. Calif: Marin Co., Lagunitas Creek, 1/2 mi. N, 1 1/2 mi. E Olema, Tocaloma

1682 Triturus granulosus (aquatic)
1683 " " "
1684 " " "
1685 " " "
1686 " " "
1687 " " "
1688 " " "
1689 " " "
1690 " " "

22 Mar. Calif.: Marin Co., 3/4 mi. E, 1 1/2 mi. S Olema

1691 Triturus granulosus (aquatic)
1692 " " "
1693 Thamnophis elegans aquaticus
1694 Thamnophis sirtalis infernalis

23 Mar. Calif.: Calaveras Co., Angels Creek, 1/2 mi. S, 1 1/4 mi. W Murphys.

1695 Thamnophis sirtalis fitchi

23 Mar. Calif.: Calaveras Co., 2 1/2 mi. N, 3 1/2 mi. E Murphys

1696 Aneides l. lugubris
1697 " " "

23 Mar. Calif.: Calaveras Co., Calaveras Big Trees State Park

1698 Bufo boreas halophilus

23 Mar. Calif.: Calaveras Co., Moran Creek, 2 mi. N, 6 1/2 mi. E Sheep Ranch (town)

1699 Bufo boreas halophilus
1700 Hyla regilla

W. Reimer
1953

Catalogue

23 Mar. Calif.: Tuolumne Co., Woods Creek, 1 mi. S, 1 mi. E Columbia

1701 Aneides l. lugubris

30 Mar. Calif: Sonoma Co., Warm Springs Creek, ½ mi. N, 1 mi. W Skaggs Springs

1702 Triturus granulosus (aquatic)

1703 Triturus rivularis "

1704 " " "

1705 Aneides flavipunctatus

1706 " "

1707 " "

1708 " "

1709 Aneides lugubris

1710 " "

1711 " "

1712 Bufo boreas halophilus

1713 " " "

1714 Thamnophis sirtalis infernalis

30 Mar. Calif.: Sonoma Co., Wild Cattle Creek, ½ mi. S, 4½ mi. W Skaggs Springs, 800 ft.

1715 Triturus granulosus (aquatic)

1716 " " "

1717 " " "

1718 " " "

1719 Triturus rivularis "

1720 " " "

1721 " " "

1722 " " "

1723 " " "

W. Riemer
1953

Catalogue

30 Mar. Calif.: ~~[illegible]~~ Sonoma Co., Wild Cattle Creek, 1/2 mi. S, 4 1/2 mi. W Skaggs Springs, 800 ft.

1724 Triturus rivularis (aquatic)
1725 " " "

30 Mar. Calif.: Sonoma Co., Mill Creek, 1 1/2 mi. S, 3 mi. W Healdsburg, 325 ft.

1726 Triturus rivularis (aquatic)
1727 " " "
1728 " " "
1729 " " "
1730 " " "
1731 " " "
1732 Aneides flavipunctatus
1733 " "
1734 Aneides lugubris
1735 Coluber constrictor mormon

4 Apr. Calif.: Santa Cruz Co., East Waddell Creek, 3/4 mi. S, 1/2 mi. W Big Basin Redwood Park Headquarters, 950 ft.

1736 Triturus granulosus (aquatic)
1737 " " "
1738 Triturus torosus (aquatic)
1739 " " "
1740 " " "
1741 Gerrhonotus coeruleus coeruleus

4 Apr. Calif.: Santa Cruz Co., Bear Creek, 1 1/2 mi. N, 1 3/4 mi. E Boulder Creek (town), 650 ft.

1742 Triturus torosus (aquatic)
1743 " " "
1744 " " "

W. Riemer
1953

Catalogue

4 Apr. Calif: Santa Cruz Co., Bear Creek, 1½ mi. N, 1¾ mi. E Boulder Creek (town), 650 ft.

1745 Triturus torosus (aquatic)
1746 " " "
1747 " " "
1748 " " "
1749 " " "
1750 " " "
1751 " " "
1752 " " "
1753 " " "
1754 " " "
1755 " " "
1756 " " "
1757 " " "
1758 " " "
1759 " " "
1760 " " "
1761 " " "
1762 " " "
1763 Triturus granulosus (aquatic)
1764 " " "
1765 Gerrhonotus c. coeruleus

? 1953 Nevada: Churchill Co., 4 mi. W Fallon

1766 ♀ Chelydra serpentina 69 ova 22-23 mm dia. J. Alcorn (collector)

4 July 1952 Mexico: Durango: 10 mi. NW Las Adjuntas

1767 Hyla arenicolor (coll. S. Weitzman)
1768 " " "

W. Riemer
1953

Catalogue

1 July 1952 Mexico: Durango: Rio Hondo, ~~near~~ 1-2 mi. N Las Adjuntas

1769 Hyla eximia (coll. S. Weitzman + J. Lattin)

1770 " " "

1771 " " "

18 Apr. 1953 Calif.: Madera Co., O'Neals.

1772 Clemmys marmorata

1773 " "

1774 " "

18 Apr. Calif.: Madera Co., 1 mi. W O'Neals

1775 Thamnophis elegans couchi

19 Apr. Calif.: Mariposa Co., 3 mi. NE Briceburg, Feliciana Creek,

1776 Triturus sierrae (aquatic)

1777 " " "

1778 " " "

1779 " " "

1780 " " "

1781 " " "

1782 " " "

1783 " " "

1784 " " "

1785 " " "

1786 " " "

1787 " " "

1788 " " "

1789 " " "

1790 " " "

W. Riemer
1953

Catalogue

22 Apr. Calif.: Contra Costa Co., Lafayette Reservoir

1791 Triturus torosus (terrestrial)

1792 Thamnophis elegans atratus

25 Apr. Calif.: Fresno Co., Sequoia Lake, 5200 ft.

1793 Triturus sierrae (coll. R. Zweifel)

1794 " " "

1795 " " "

1796 " " "

1797 " " "

1 May Calif.: Sacramento Co., 6 mi. E Natoma, Sacramento-Eldorado Co. line

1798 Thamnophis elegans elegans

1 May Calif.: Eldorado Co., Webber Creek, 3 mi. SW Placerville

1799 Triturus sierrae (aquatic)

1800 " " "

1801 " " "

1802 Aneides l. lugubris

1803 " " "

1804 " " "

1805 Rana catesbeiana (larva)

1806 Clemmys marmorata

1 May Calif.: Eldorado Co., 4 mi. NW Coloma

1807 Rana aurora draytoni

1808 " " "

2 May Calif.: Butte Co., 3 mi. S Magalia

1809 Gerrhonotus multicarinatus multicarinatus

W. Riemer
1953

Catalogue

2 May Calif.: Los Angeles Co., Topanga Canyon, 400 ft.
1810 Triturus torosus (coll. R. Zweifel)
1811 " " "
1812 " " "
1813 " " "
1814 " " "
1815 " " "
3 May Calif.: San Luis Obispo Co., 2 mi. E San Luis Obispo, Reservoir Canyon, 500 ft.
1816 Triturus torosus (coll. R. Zweifel)
1817 " " "
1818 " " "
1819 " " "
1820 " " "
3 May Calif.: Butte Co., 5 mi. SW Centerville
1821 Rana catesbeiana
3 May Calif.: Shasta Co., 4 mi. WSW Bella Vista
1822 Rana catesbeiana
3 May Calif.: Shasta Co., 1 mi. NE Ingot
1823 Rana catesbeiana
1824 Clemmys marmorata
1825 Triturus sierrae (aquatic)
1826 " " "
1827 " " "
1828 " " "
1829 " " "
1830 Triturus granulosus (aquatic)
1831 " " "

W. Reimer
1953

Catalogue

3 May Calif.: Shasta Co., 1 mi. NE Ingot

1832 Triturus granulosus (aquatic)
1833 " " "
1834 " " "
1835 " " "
1836 " " "
1837 " " "
1838 " " "
1839 " " "
1840 " " "
1841 " " "
1842 " " "
1843 " " "
1844 " " "
1845 " " "
1846 " " "
1847 " " "
1848 " " "
1849 " " "
1850 " " "
1851 " " "
1852 " " "
1853 " " "
1854 " " "
1855 " " " (series for exchange)

3 May Calif.: Shasta Co., 1 mi. NE Bella Vista

1856 Thamnophis elegans elegans

W. Riemer
1953

Catalogue

4 May Calif.: Glenn Co., 7 mi. N Maxwell

1857 Thamnophis elegans gigas

22 May Calif.: Contra Costa Co., Lafayette Reservoir

1858 Triturus torosus (terrestrial)

1859 " " "

1860 " " "

1861 " " "

1862 " " "

1863 " " "

16 June Calif.: San Luis Obispo Co., Lopez Canyon, 7 mi. E, 2½ mi. N Arroyo Grande

1864 Triturus torosus

1865 " "

1866 " "

1867 " "

1868 " "

1869 " "

1870 " "

1871 " "

1872 " "

1873 " "

1874 Rana boylei

1875 " "

Preserved 19 June 1953

→ See 1887

24 June Mexico: Chihuahua: Rio Papigochic, Miñaca, 6300 ft.

1876 Thamnophis rufipunctatus

25 June Mexico: Chihuahua: Rio Papigochic, Miñaca, 6300 ft.

1877 Bufo woodhousei (larvae)

1878 " " (post-larval young)

W. Reimer
1953

Catalogue

25 June Mexico: Chihuahua: Río Papigochic, Miñaca, 6300 ft.

1879 Thamnophis eques
1880 " "
1881 " "
1882 " "
1883 Kinosternon
1884 "
1885 "
1886 "

23 June Mexico: Chihuahua: 22 mi. N Villa Ahumada

1887 Phrynosoma cornutum

25 June Mexico: Chihuahua: Río Papigochic, Miñaca, 6300 ft.

1888 Bufo woodhousei (skeleton)
1889 " "
1890 " "
1891 Rana pipiens
1892 " "
1893 " "

26 June Mexico: Chihuahua: 9 mi. ESE La Junta, 70 mi. WSW Chihuahua

1894 Scaphiopus sp. (larvae)

26 June Mexico: Chihuahua: 1.6 mi. W Pedernales

1895 Pituophis catenifer affinis
1896 Sceloporus poinsetti
1897 " "
1898 ♂ Pipilo fuscus testis 10 mm. 51 gms.
Almost barren riverbed flood plain in depauperate, scraggly pine-oak forest.
1899 Sceloporus poinsetti

W. Reimer
1953

Catalogue

26 June Mexico: Chihuahua: 1.6 mi. W ~~Pent~~ Pedernales
1900 Sceloporus poinsetti
1901 " "
28 June Mexico: Chihuahua: 7 mi. SW El Vergel (=Laguanitas), 7800 ft.
1902 Thamnophis
29 June Mexico: Chihuahua: 7 mi. SW El Vergel (=Laguanita), 7800 ft.
1903 Sceloporus jarrovi
1904 " "
1905 " "
1906 " "
1907 " "
1908 " "
1909 " "
1910 " "
1911 " "
1912 " "
1913 " "
1914 " "
1915 Thamnophis
1916 Hyla arenicolor
1917 Rana pipiens
1918 " "
1919 " "
1920 " "
1921 " "
1922 " "
1923 " "
1924 " "

W. Reimer
1953

Catalogue

29 June Mexico: Chihuahua: 7 mi. SW El Vergel (= Lagunita), 7800 ft.:

1925 Ambystoma sp.
1926 "
1927 "
1928 "
1929 "
1930 "
1931 "
1932 Bufo sp.
1933 " "
1934 " sp. (post-larval)
1935 " sp. (larvae)
1936 " sp. (larvae)
1937 Rana pipiens (larva)
1938 ~~Scaphiopus~~ Bufo sp. (larva)
1939 Bufo sp.
1940 " "

30 June Mexico: Chihuahua: 7 mi. SW El Vergel (= Lagunita), 7800 ft.

1941 ~~♂~~ ♀ ? Steller Jay ~~ovary~~ ova ? 91.3 gms.
1942 ♂ " " testis 2 mm 92.0 gms.
1943 ♀ ? " " ova ? 93.7 gms.
All three above taken from flock of 4-5 in open, young pine forest. Not especially wary.
1944 ♂ Ground squirrel 150.2 gm. 235, 60, 40, 24 mm.
Taken on rocks in open, young pine forest.
1945 ♂ Junco testis 7 mm. 21.2 gm iris yellow-orange. Taken with mate (?) while feeding on river bank. Also ~~see~~ seen in young pine stands.

W. Riemer
1953

Catalogue

30 June Mexico: Chihuahua: 7 mi. SW El Vergel (=Laguna), 7800 ft.

1946 Sceloporus jarrovi
1947 " "
1948 " "
1949 " "
1950 " "
1951 " "
1952 " — grammicus
1953 Sceloporus poinsetti
1954 Bufo sp.
1955 " "
1956 " "
1957 " "
1958 " "
1959 " "
1960 " "
1961 " "
1962 " "
1963 " "
1964 Hyla arenicolor

1 July Mexico: Chihuahua: 7 mi. SW El Vergel (=Laguna), 7800 ft.

1965 ♀ Peromyscus 27.7 gms. 149, 58, 21, 19. 3 emb./22 mm.
Taken among rocky outcrops in open forest of pine.
1966 ♂ Chipmunk 67.2 gms 220, 93, 34, 21 mm.
From rocky outcrop, open pine forest. Taken in early morning in snap-trap.
1967 Sceloporus jarrovi

W. Rieman
1953

Catalogue

1 July Mexico: Chihuahua: 7 mi. SW El Vergel (=Lagunita), 7800 ft.

1968 Rana pipiens
1969 " "
1970 " "
1971 Sceloporus jarrovi
1972 " "
1973 " "
1974 " "
1975 " "
1976 Sceloporus poinsetti
1977 " "

2 July Mexico: Chihuahua: 7 mi. SW El Vergel (=Lagunita), 7800 ft.

1977 A Pinus Hartwegii Lindl.
Appears to be most abundant tree, forming open forest stands
1978 Thamnophis cyrtopsis
1979 Thamnophis errans
1980 Thamnophis rufipunctatus
1981 " "
1982 Thamnophis eques
1983 Eleutherodactylus
1984 Bufo sp.
1985 " "
→ See 2006

3 July Mexico: Chihuahua: 3 mi. NE Rio Verde (town), 7600 ft.

1986 ♀ Water Ouzel ova <1 mm 47.3 gm
1987 Thamnophis rufipunctatus
1988 Eumeces sp.
1989 Anuran larvae (Hyla?)

W. Riemer
1953

Catalogue

3 July Mexico: Chihuahua: 7 mi. SW El Vergel (=Lagunita), 7800 ft.

1990 Eleutherodactylus sp.
1991 Sceloporus grammicus
1992 " "
1993 " "
1994 Thamnophis rufipunctatus
1995 " "
1996 " "
1997 " "
1998 " "
1999 " "
2000 " "
2001 " "
2002 Thamnophis eques
2003 Thamnophis errans
→ See 2018 A

4 July Mexico: Chihuahua: 7 mi. SW El Vergel (=Lagunita), 7800 ft.

2004 ♂ Peromyscus 21.6 gms 146, 58, 20, 20
2005 ♀ Bluebird 24.6 gms ovum 1 mm

2 July Mexico: Chihuahua: 7 mi. SW El Vergel (=Lagunita), 7800 ft.

2006 ~~Sceloporus~~ Sceloporus poinsetti
2007 " "
2008 " "
2009 " "
2010 Sceloporus jarrovi
2011 " "
2012 " "
2013 " "
2014 " "

W. Riemer
1953

Catalogue

2 July Mexico: Chihuahua: 7 mi. SW El Vergel (=Laguinita), 7800 ft.

2015 Sceloporus grammicus
2016 " "
2017 " "
2018 " "

3 July Mexico: Chihuahua: 7 mi. SW El Vergel (=Laguinita), 7800 ft.

2018A Oak (=Quercus ?) Quercus fulva Liebm.
Locally abundant. Scarce near camp
and in open stands.
2018B Juniperus (?) Juniperus flaccida Sch.
Not common as trees, frequently as
small broken shrubs.
2018C Pinus ayacahuite Ehren.
Not common.

5 July Mexico: Chihuahua: 7 mi. SW El Vergel (=Laguinita), 7800 ft.

2018D (Madrone) Ficus sp. (sterile)
Common, often as large trees

5 July Mexico: Chihuahua: 8 mi. NE El Vergel (=Laguinita), 8000 ft.

2018E Pinus leiophylla Sch. & Cham.
Common

5 July Mexico: Chihuahua: 6 mi. S, 16 mi. W San Francisco del Oro

2019 Hyla arenicolor

6 July Mexico: Durango: Rio Florido at Camitillo, 6100 ft.

2020 Cnemidophorus sacki communis
2021 Thamnophis eques
2022 " "

6 July Mexico: Durango: Rio Nazas at San Salvador

2023 Sceloporus undulatus

W. Rieman
1953

Catalogue

6 July Mexico: Durango: Rio Nazas at San Salvador
2024 Sceloporus undulatus
2025 " "
2026 Holbrookia ~~maculata~~ texana
2027 " "
2028 Cnemidophorus sacki scalaris
2029 " " "
2030 " " "
6 July Mexico: Durango: 8 mi. E Canatlan, 6300 ft.
2031 Bufo cognatus
2032 " "
2033 " "
6 July Mexico: Durango: 22 mi. N Durango, 6300 ft.
2034 Thamnophis sp.
6 July Mexico: Durango: 18 mi. N Durango
2035 Bufo cognatus
2036 Scaphiopus sp.
6 July Mexico: Durango: 16 mi. N Durango
2037 Hypsiglena sp.
6 July Mexico: Durango: 1½ mi. N Morcillo, 6300 ft.
2038 Bufo cognatus
2039 Bufo punctatus
~~8 July Mexico: Durango: 6 mi. WSW Las Adjuntas~~
7 July Mexico: Durango: 33 mi. ENE El Salto, 7200 ft.
2040 Thamnophis eques
2041 Thamnophis rufipunctatus
8 July Mexico: Durango: 6 mi. WSW Las Adjuntas, 8500 ft.
2042 Thamnophis errans

W. Reimer
1953

Catalogue

8 July Mexico: Durango: 6 mi. WSW Las Adjuntas, 8500 ft.

2043 Eumeces sp.
2044 Ambystoma sp.
2045 " "
2046 " "
2047 " "
2048 " "
2049 " "
2050 ~~" "~~ discarded W.R. 26 Oct. 1953
2051 Rana sp. (larval series)
2052 Ambystoma sp.
2053 " "
2054 " "
2055 " "
2056 " "
2057 Hyla eximia
2058 " "

9 July Mexico: Durango: 6 mi. WSW Las Adjuntas, 8500 ft.

2059 ♂ Spotted towhee testis 9 mm 43.5 gm.
Small grassy clearing in pine forest.
2060 ♀ Spotted towhee ova 2 mm 37.5 gm.
As above.
2061 Sceloporus grammicus
2062 Sceloporus poinsetti
2063 Eumeces sp.
2064 Hyla eximia

10 July Mexico: Durango: 6 mi. WSW Las Adjuntas, 8500 ft.

2065 Sceloporus grammicus

W. Reimer
1953

Catalogue

10 July Mexico: Durango: 6 mi. WSW Las Adjuntas, 8500 ft.

2066 Sceloporus grammicus
2067 " "
2068 Rana pipiens
2069 Hyla eximia
2070 ♀ Pigmy nuthatch. ova < 1 mm. 9.6 gms.
2071 ♀ " " ova < 1 mm. 9.7 gms.
Both above taken from small flock passing through sapling stand of pines in afternoon in camp area.

11 July Mexico: Durango: 6 mi. WSW Las Adjuntas, 8500 ft.

2072 ♀ Peromyscus 21.1 gms 145, 62, 19, 18 mm. no. emb.
Trapped in tent in pine forest at edge of clearing.
2073 Bufo sp.

11 July Mexico: Durango: 2 mi. by road NE La Cuidad, 8000 ft.

2074 juv. ♂ Red-backed Junco 20.0 gms. testis 1 mm. In open pine forest. Could not fly. Iris not yellow - dull gray. 2 others flushed from nest.
2075 Ambystoma rosaceum
2076 " "
2077 " "
2078 Rana pipiens
2079 Hyla eximia
2080 " "
2081 " "
2082 " "
2083 " "
2084 " "
2085 " "
2086 " "

W. Riemer
1953

Catalogue

11 July Mexico: Durango: 2 mi. by rd. NE La Ciudad, 8000 ft.

2087 Hyla eximia
2088 " "
2089 " "
2090 " "
2091 " "
2092 " "
2093 " "
2094 " "
2095 " "
2096 " "
2097 " "
2098 " "
2099 " "
2100 " "
2101 " "

11 July Mexico: Durango(?): 5 mi. by road SW La Ciudad, 8500 ft.

2102 Crotalus triseriatus

11 July Mexico: Sinaloa: 17 mi. by road NE El Batel

2103 Sceloporus jarrovi

12 July Mexico: Sinaloa: 10 mi. by road NE El Batel, 6400 ft.

2104 Rana sp.
2105 Sceloporus jarrovi
2106 " "
2107 Anolis sp.

12 July Mexico: Sinaloa: 14 mi. by rd. SW El Batel, 4200 ft.

2108 Rana sp.
2108A Terrestrial crab.

W. Riemer
1953

Catalogue

12 July Mexico: Sinaloa: 9 mi. N Mazatlan, 600 ft.

2109 Scaphiopus couchi
2110 " "
2111 " "
2112 " "
2113 " "
2114 " "
2115 Smilisca baudini
2116 Pternohyla fodiens

13 July Mexico: Sinaloa: 9 mi. N Mazatlan, 600 ft.

2117 Cnemidophorus sackii
2118 " "
2119 Oxybelis sp.
2120 Smilisca baudini
2121 Pternohyla fodiens
2122 Scaphiopus couchi
2123 " "
2124 " "
2125 " "
2126 " "
2127 " "
2128 Pternohyla fodiens
2129 Bufo mazatlanensis
2130 Pternohyla fodiens
2131 " "
~~2132 Bufo horribilis~~

W. Riemer
1953

Catalogue

13 July Mexico: Sinaloa: 5 mi. N Mazatlan

2132 Bufo horribilis
2133 Pternohyla fodiens
2134 " "
2135 " "
2136 " "
2137 " "
2138 Bufo mazatlanensis
2139 Smilisca baudini
2140 Hypsiglena torquata

14 July Mexico: Sinaloa: 9 mi. N Mazatlan; 100 ft.

2141 Scaphiopus couchi
2142 " "
2143 " "
2144 " "
2145 " "
2146 " "
2147 Smilisca baudini
2148 " "
2149 " "
2150 " "
2151 " "
2152 Bufo mazatlanensis
2153 " "
2154 " "
2155 Diaglena spatula
2156 " "
2157 " "

W. Riemer
1953

Catalogue

14 July Mexico: Sinaloa: 9 mi. N Mazatlan, 100 ft.

2158 Agalychnis dacnicolor

2159 Bufo horribilis

2160 Leptophis diplotropis

2161 Ctenosaura hemilopha

2162 Hypopachus sp.

15 July Mexico: Sinaloa: 9 mi. N Mazatlan, 100 ft.

2163 Sceloporus sp.

2164 Sceloporus sp.

2165 Cnemidophorus sacki

2166 " "

2167 ♀ Pternohyla fodiens (gravid) }

2168 Agalychnis dacnicolor } skeletons

2169 (sex ?) Smilisca baudini }

15 July Mexico: Sinaloa: 10 mi N Mazatlan

2170 Trimorphodon paucimaculata

15 July Mexico: Sinaloa: 20 mi. N Mazatlan

2171 Agalychnis dacnicolor

15 July Mexico: Sinaloa: 4 mi. N Tropic of Cancer N of Mazatlan

2172 Bufo horribilis

15 July Mexico: Sinaloa: 20 mi. N Mazatlan

2173 Rhinocheilus lecontei

15 July Mexico: Sinaloa: 9 mi. N Mazatlan, 100 ft.

2174 ♀ Inca Dove ovum 5 mm. ? gms.

16 July Mexico: Sinaloa: 17 mi. N Mazatlan

2175 Lampropeltis doliata

W. Riemer
1953

Catalogue

16 July Mexico: Sinaloa: 22 mi. N Mazatlan

2176 Rhinocheilus lecontei

16 July Mexico: Sinaloa: 17 mi. N Mazatlan

2177 Pituophis catenifer

16 July Mexico: Sinaloa: 10 mi. N Mazatlan

2178 ♂ Scaphiopus couchi (skeleton)

16 July Mexico: Sinaloa: 11 mi. N Mazatlan

2179 Agalychnis dacnicolor

17 July Mexico: Sinaloa: 4 mi. N Mazatlan

2180 Sceloporus clarki

18 July Mexico: Sinaloa: 4 mi. N Mazatlan

2181 Callisaurus draconoides bogerti

2182 " " "

2183 " " "

18 July Mexico: Sinaloa: 25 mi. NW Elota

2184 Cnemidophorus sacki

2185 " "

2186 Sceloporus clarki

2187 " "

2188 Holbrookia maculata

19 July Mexico: Sinaloa: 7 mi. W Guamúchil

2189 Sceloporus clarki

2190 Urosaurus ornatus

19 July Mexico: Sonora: 4.4 mi. N Ciudad Obregon

2191 ~~Sceloporus clarki~~ Bufo cognatus

2192 Cnemidophorus tigris

W. Riemer
1953

Catalogue

19 July Mexico: Sonora: 6 mi. N Ciudad Obregon

2193 ~~Rana~~ pipiens ~~(skeleton)~~ lost

19 July Mexico: Sonora: 1½ mi. E Bacum

2194 Bufo alvarius (skeleton)

19 July Mexico: Sonora: 11 mi. NW ~~Bacum~~ Vicam

2195 Pternohyla fodiens
2196 " "
2197 " "
2198 " "
2199 Bufo debilis
2200 " "
2201 " "
2202 " "

20 July Mexico: Sonora: 4 mi. N Guaymas

2203 Holbrookia maculata
2204 " "
2205 " "
2206 " "
2207 Phyllodactylus tuberculatus
2208 " "

20 July Mexico: Sonora: 3 mi. S El Oasis (45 mi. N Hermosillo)

2209 Callisaurus draconoides
2210 Urosaurus ornatus
2211 " "
2212 Dipsosaurus dorsalis
2213 " "
2214 Holbrookia maculata
2215 Cnemidophorus tigris

W. Riemer
1953

Catalogue

20 July Mexico: Sonora: 11 mi. N Benjamin Hill.
2216 Pternohyla fodiens
20 July Mexico: Sonora: 4 mi. NE Santa Ana
2217 Trimorphodon paucimaculata
21 July Mexico: Sonora: 25 mi. N Imuris, 3500 ft.
2218 Thamnophis cyrtopsis
21 July Arizona: Santa Cruz Co., Peña Blanca Springs
2219 Microhyla mazatlanensis
22 July Arizona: Santa Cruz Co., Peña Blanca Springs
2220 Holbrookia maculata
23 July Arizona: Yuma Co., Shithouse Mts. (Kofa), Palm Canyon
2221 Uta stansburiana
24 July Arizona: Yuma Co., ~~Calif: Riverside Co.~~, 6 mi. E Ehrenburg
2222 Salvadora hexalepis
24 July Calif.: Riverside Co., 16 mi. E Coachella, 1400 ft.
2223 Masticophis flagellum

Riemer
1953

21 July Brazil: 30 mi. N Rio de Janeiro, Petropolis

2224 Anurans (series of 9)

(collected by Sterling Bunnell)

1953
~~No date~~ Panama (Canal Zone): Forest Reserve ~~— believed to be from this country~~

2225 ♀ Bufo typhonius (skeleton) } collected by

2226 ♀ " " (skeleton) } S. Bunnell

1953
~~No date~~ California, probably the Bay Area

2227 ♀ Rana aurora (skeleton) } collected by

2228 ♂ " " (skeleton) } R. Stebbins ?

1953
~~No date~~ Panama (Canal Zone): Forest Reserve ~~— believed to be from this country~~

2229 Bufo typhonius - collected by S. Bunnell

13 Nov. Calif.: Contra Costa Co., 1 mi. NE Walnut Creek

2230 ♂ Bufo boreas (skeletonized)

13 Nov. Calif.: Contra Costa Co., Kellogg Creek, 3 mi. W ½ mi. S ~~Bryon~~ Byron

2231 ♂ Rana aurora (skeletonized)

2232 Ambystoma tigrinum

2233 " "

2234 " " (discarded)

2235 " "

13 Nov. Calif.: ~~Contra Costa Co.~~, Alameda Co., 1½ mi. N, 4 mi. W Altamont

2236 Aneides lugubris

2237 " "

2238 " "

13 Nov. Calif.: ~~Alameda Co.~~ Contra Costa Co., 1 mi. N, 4 mi. E San Ramon

2239 Aneides lugubris

13 Nov. Calif.: Contra Costa Co., 2 mi. N, 2 mi. E San Ramon

2240 Aneides lugubris

2241 " "

1953 W. Riemer
1954

14 Nov. Calif.: Mariposa Co., vicinity of Coulterville
2242 Taricha torosa sierrae } collector: R. de Saussure
2243 Ensatina eschscholtzia platensis }

Dec. Calif.: Contra Costa Co., 2 mi. NE Walnut Creek, 150 ft.
2244 Ambystoma tigrinum

Dec. Calif.: Contra Costa Co., 3 mi. W Mt. Diablo, 1500 ft.
2245 ♂ Rana aurora (skeleton)

Nov.(?) Florida: [said to come from this state]
2246 Diadophis punctatus } received in shipment of moss by entomology
2247 " "

19 Dec. Calif.: Contra Costa Co., Wildcat Creek between Lake Anza and Jewel Lake, Tilden Regional Park
2248 Taricha torosa
2249 " "
2250 " "
2251 " "

26 Dec. Calif.: Contra Costa Co., Tilden Regional Park, ~~near~~
2252 Taricha torosa (postlarval)
2253 " " "
2254 " " "

1954
19 Jan. Calif.: Contra Costa Co., Tilden Regional Park, near Lake Anza
2255 Taricha torosa

23 Jan. Calif.: Lake Co., Nice
2256 Taricha torosa } collected by R. Darby
2257 " "
2258 " "

W. Riemer 1954

3 Feb. Calif.: Contra Costa Co., Briones Hills, 3¾ mi. N, ¼ mi. W Lafayette

2259 Taricha torosa
2260 " "
2261 " "
2262 Taricha (granulosa ?)
2263 " "
2264 " "
2265 " "
2266 " "
2267 " "
2268 " "
2269 " "
2270 " "
2271 " "
2272 " "
2273 " "
2274 " "
2275 " "
2276 " "
2277 " "
2278 " "
2279 " "

3 Feb. Calif: Tulare Co., 2 mi. W California Hot Springs, Deer Creek

2280 Taricha sierrae
2281 " "

21 Feb. Calif.: Alameda Co., Corral Hollow, 5½ mi. S Midway

2282 Eumeces gilberti

8 Feb. Mexico: Nayarit: San Blas

2283 Agalychnis dacnicolor collected by John Tashjian

W. Riemer	1954
Summer 1952	Mexico: Chihuahua: 40 mi. ~~N~~ W Chihuahua
2284	Phrynosoma cornutum (collector: S. Weitzman)
Summer 1952	Mexico: Chihuahua: 3 mi. NE Rio Verde (town), 7600 ft.
2285	Ambystoma rosaceum (larva) (collector: S. Weitzman)
2286	" " " "
between Aug 1942-1943	Mexico: Guerrero: near Chilpancingo
2287	Typhlops braminus (collector: W.W. Brown) (Found in bottle of Lampropeltis doliata all of which came from W.W. Brown and also all from near Chilpancingo, Guerrero, (Accn 7700). Found Dec. 1953.)
23 Feb.	Calif.: Contra Costa Co., Briones Hills, 3 3/4 mi. N, 1 1/4 mi. W Lafayette
2288	Taricha torosa
2289	" "
2290	" "
2291	" "
2292	" "
2293	" "
2294	" "
2295	" "
2296	" "
2297	" "
2298	" "
2299	" "
2300	" "
2301	" "
2302	" "
2303	" "
2304	" "

1954 W. Riemer

23 Feb. Calif.: Contra Costa Co., Briones Hills, 3¾ mi. N, 1¼ mi. W Lafayette

2305 Taricha torosa
2306 " "
2307 " "
2308 " "
2309 " "
2310 " "
2311 " "
2312 " "
2313 " "
2314 " "
2315 " "
2316 " "
2317 " "
2318 " "
2319 " "
2320 " "
2321 " "
2322 " "
2323 " "
2324 Taricha granulosa
2325 " "
2326 " "
2327 " "
2328 " "
2329 " "
2330 " "
2331 " "
2332 " "
2333 " "
2334 " "
2335 " "
2336 " "

W. Riemer 1954

23 Feb. Calif.: Contra Costa Co., Briones Hills, 3¾ mi. N, 1¼ mi. W Lafayette

2337 Taricha granulosa
2338 " " (larvae)

21 Feb. Calif.: Fresno Co., 2 mi. SW Prather

2339 Taricha sierrae (coll. H. Childs)
2340 " "
2341 " "
2342 " "
2343 " "
2344 " "
2345 " "

1 Mar. Calif.: Contra Costa Co., Oursan Ridge, 1 mi. N, 2 mi. E San Pablo Reservoir Dam

2346 Taricha granulosa
2347 " "
2348 " "
2349 Taricha torosa
2350 " "
2351 " "
2352 " "
2353 " "
2354 " "
2355 ~~2455~~ " "

23 Feb. Calif.: Contra Costa Co., Briones Hills, 3¾ mi. N, 1¼ mi. W Lafayette
(this group killed about 23 March)

2356 ~~2456~~ Taricha torosa
2357 ~~2457~~ " "
2358 ~~2458~~ " "
2359 ~~2459~~ " "

1757
W. Riemer 1954

23 Feb. Calif: Contra Costa Co., Briones Hills, 3 3/4 mi. N, 1 1/4 mi. W Lafayette
(this group killed about 23 Mar.)

0 ~~2460~~ Taricha torosa
.1 ~~2461~~ " "
.2 ~~2462~~ " "
.3 ~~2463~~ " "
.4 ~~2464~~ " "
65 ~~2465~~ Taricha granulosa
66 ~~2466~~ " "
67 ~~24~~ " "
2368 " "
2369 " "
2370 " "
2371 " "
2372 " "
2373 " "
2374 " " (post larval)
2375 " " "
2376 " " (4 larvae)

Mar. Calif.: Contra Costa Co., Briones Hills, 3 3/4 mi. N, 1 1/4 mi. W Lafayette
2377 Taricha granulosa (larva)

250 ft.
4 April Calif.: ~~Contra~~ Sonoma Co., 1/2 mi. NNW Cazadero
2378 Taricha rivularis (collector E. Voltz)

~~5 May Calif.: Santa Cruz Co., Big Creek, Swanton~~
~~2379 Dicamptodon ensatus~~ died and discarded

8 May Calif.: Santa Cruz Co., 2 mi. W Ben ~~Lomond~~ Lomond
2379 Coluber constrictor mormon

W. Riemer 1954

15 May Calif.: Mendocino Co., ~~Hopland~~, Univ. Calif. Hopland Field Station.

2380 Aneides lugubris
2381 " "
2382 " "
2383 Aneides flavipunctatus
2384 " "
2385 " "
2386 " "
2387 " "
2388 " "
2389 " "
2390 " "
2391 " "
2392 Eumeces skiltonianus
2393 " "
2394 Gerrhonotus multicarinatus
2395 Sceloporus occidentalis
2396 Diadophis amabilis
2397 Coluber constrictor
2398 Thamnophis elegans

21 May Calif.: **Solano** Co., ~~Solano-Napa Co. line~~ Vaca Mts., 9 mi. NW Vacaville

2399 Pituophis catenifer (striped phase)

25 Sept. Calif.: Contra Costa Co., Briones Hills, 3¾ mi. N, 1¼ mi. W Lafayette.

2400 Taricha granulosa
2401 " "
2402 " "
2403 " "
2404 " "
2405 " "

1955 W. Riemer

25 Sept. Calif: Contra Costa Co., Briones Hills, 3 3/4 mi. N, 1 1/4 mi. W Lafayette

2406 Taricha granulosa

2407 " "

2408 Thamnophis elegans atratus

2409 " " "

2410 Taricha torosa (3 larvae)

1955

25 Jan. Calif.: Los Angeles Co., Pasadena, Del Vina St.

2411 Batrachoseps pacificus

Riemer, W. J.

1947-1954

Journal

W. J. Riemer
1947

Journal

Lassen Volcanic National Park, Calif.

5 Aug. Robert Stebbins, his wife and two children, and myself left Canyon, Contra Costa Co. on the morning of date, proceeded on U.S. 99E, by U.C. truck # 112, to Red Bluff. Leaving Red Bluff at 1930 we proceeded on Calif # 36 into Lassen Park.

Just after dark a large rattlesnake, probably C. viridis, was observed crossing the road in the headlights. An unsuccessful attempt to kill or capture it was made. Other animals observed on the road included a fox, numerous rodents, among them a kangaroo rat, and several toads. One toad, which was taken, is entered in R.C. Stebbins' field notes.

Camp was set up near Manzanita Lake about 2330.

6 Aug. The greater part of the day was

Lassen National Park, Calif. cont.

6 Aug. spend in capturing and marking a population of Sceloporus graciosus gracilis in a study area parallelling the trail leading from the Park Museum to the ranger's quarters. It is a procedure which has been followed at intervals by Stebbins for about five years in an attempt to discover the habitat range of individuals of the species, longivity and what ever less shows up. Procedure consists of noosing a specimen, making any pertinent notes, clipping the toes in a given formula so that the animal may be recognized at a later date, marking the animal with colored pencil, so that it may be recognized during the next few days and thereby eliminate recapturing it, and lastly spotting the capture point on a detail map of the area.

7 Aug. Work in the study area described

W. J. Riemer

1947

Journal

Lassen Nat'l. Park, Calif. cont.

above, was continued.

8 Aug. Same as 7 Aug.

9 Aug. The afternoon was spent about Subway Caves, Shasta Co., and Old Station, Shasta Co.

A superficial search for Charina bottae was made at the entrance of Subway Caves in the damp sand. One was actually taken in a similar situation in the caves by R. Stebbins several years previous. Ranger Joe Burgess stated that a Thamnophis and a Crotalus were taken in the caves recently. No Charina were obtained but a Hyla regilla was taken perhaps 70 feet from the entrance. It was resting on the damp rocky lava floor in a spot very dimly lite.

A short search thru the manzanita surrounding the entrance to the caves produced 5 Sceloporus o. occidentalis and 1 Sceloporus graciosus gracilis both in

W. J. Riemer
1947

Journal

Lassen Volcanic National Park, Calif. cont.

9 Aug. the same habitat.
Later at a point 200 yds. W. of Old Station along an irrigation ditch two Thamnophis ordinoides elegans were taken. All of the day's collecting was done jointly by R. Stebbins and myself.

10 Aug. Again the day was spent in the S. g. gracilis study area. In the morning on the way to the area a turtle, probably Clemmys marmota, was observed sunning on a floating log in the Lily Pond, Lassen Park. An attempt to capture was unsuccessful. Identification is necessary since if it is the suspected species it may be a new altitude record.

11 Aug. A drive to Redding from Manzanita Lake showed great numbers of Horned Larks near the valley floor. A boa, Charina bottae, D.O.R.

W. Riemer
1947

Journal

Lassen Volcanic National Park, Calif. cont.

11 Aug. was procured 200 yds. E. Shingletown Station, Shasta Co.

12 Aug. Beginning at 0730 the trip home was begun. Observed on the way were Rainbow (?) trout in Emerald Lake, a natural aquarium and fish preserve in Lassen Park, and numerous egrets in the rice paddies north of Marysville, Calif. The trip ended in Canyon at 1830.

Grounds of Fleishacker Zoo, San Francisco, San Francisco Co., Calif.

24 Aug. Area was reached by transbay train and "L" car. At one of the numerous ponds containing a variety of waterfowl, mallards of both sexes, Anas p. platyrhynchos were observed. Distinguishing feature of male: up-curled tail feathers; of female: white borders to each side of speculum (metallic-colored wing patch). Coots, Fulica americana were also ~~observed~~ observed. A bird believed to be a Northern

. . .

W. Riemer
1947

Journal

Grounds of Fleishacker Zoo, San Francisco, San Francisco Co., Calif.

24 Aug. ... Phalarope, *Lobipes lobatus* was identified in the same pond, presumably all males. Distinguishing feature and basis of this identification: needle-like black bill and black legs.

3/10 - 5 3/10 mi. S. San Francisco Co. line, Skyline Blvd., San Mateo Co., Calif.

25 Aug. A routine collecting trip of Wade Fox. Present were Wade, myself, and my wife. Trip was made by auto from Berkeley starting at 0630. First stopping place about 5 mi. S. of Co. line, the weather poor. High fog, cold breeze and little sign of breakup. Ground and grass dry. Preliminary search showed snakes were not yet out. Later in the morning with the sun beginning to break thru for short intervals collecting became better. ...

W. Riemer
1947

Journal

3/10 - 5 3/10 mi. S. San Francisco Co. line,,
Skyline Blvd., San Mateo Co., Calif.

25 Aug. . . . . A fair number of snakes (exact number unknown) were picked up under iron sheeting and crawling about in the grass. Species include Coluber constrictor mormon, Thamnophis sirtalis infernalis, T. ordinoides atratus. Three Gerrhonotus c. coeruleus were also taken. Northern Phalaropes were observed on one of the ponds in the area. The area was left about 1230.

Lake Merritt, Lakeside Park, Oakland, Calif.

31 Aug. The latter portion of the morning and most of the afternoon were spent in the park by the author and his wife. Purpose of the trip was to identify the water birds. Due to boat races very few birds were present. Identified were several California gulls, Larus californicus and an Anna hummingbird, Calypte anna. The former, on the lake, and

W. Rieman 1947

Journal

Lake Merritt, Lakeside Park, Oakland, Calif.

31 Aug. ... the latter in a greenhouse or lathhouse. Noted were terns(?), Brewer's blackbirds and a ♀ mallard.

9 Sept. 4.5 mi S. San Francisco Co line, Skyline Blvd., San Mateo Co., Calif.

Wade Fox, Mary Etta Voge, Dr O. Pearson and myself left for Fox's Thamnophis collecting area in Fox's car from campus at 0645. Bright and sunny in East Bay. Heavy, cold, moving fog until after 1000 over collecting area. First snakes taken were an adult — apparently had spent the night under a sheet of iron —, and a number of young, both under objects, and wandering in the grass. As temperature rose in late morning larger snakes were taken. Pearson captured one ~~Sco~~ Sorex sp(?) Return was made to campus by 1400.

W. Riemer
1947
1948

Journal

14 Sept. '47 Berkeley Hills, Alameda Co., Calif.
My wife and I walking directly east in prolongation of Derby Ave observed and identified the following birds in the vicinity of the water-tank. California quail ♀♂; Oregon juncos, seemingly all ♀ or immature; Brown towhee. On the knoll above the CSD insignia a single California Woodpecker(?) and several California Jays (?) were seen. Just over the ridge in a grove of pines a ♂ Oregon junco and several nuthatch- or creeper-like birds were observed. Returning along the road continuing on past the upper end of Panoramic Way, a Greenback Goldfinch ~~way~~ was identified while it was eating thistle seeds.

28 Feb. '48 Strawberry Canyon, U.C. Campus, Berkeley, Alameda Co., Calif.
As part of 113 Zoology class, left parking area N of Stadium 0815. Proceeded on foot up Canyon. Note was made, in a running discourse, by Dr. S. Benson, of the diversified types of vegetation and micro-climates of

Riemer
1948

Journal

28 Feb. Strawberry Canyon, U.C. Campus, Berkeley, Alameda Co., Calif.

the canyon. South (facing) slope chiefly grassy in exposed areas. Grass short and well grazed. Gullies and lower spots support oaks, bays, Artemesia and Bacus californicus and Monkey flower bush. These latter three make up most of "dry" or "hard" chaparral, which is characteristic of S slope. N slope covered principally with trees and tangle of vines and "wet" or "soft" chaparral. Certain features found in both places, i.e. oaks, poison oak. Black berries characteristic of N slope and forms part of characteristic understory or low ground cover under trees, S slope shows less understory, though often mixture of undergrowth and areas without understory. Alders restricted to main stream bottom. Native, i.e. alders, to area; while conifers, eucalyptus and madrone introduced. Grassy areas essentially same in extent as 50 years ago. Principal changes are due to cultivation of conifers and eucalyptus. No clearing has been done for grazing purposes. Note was made of pocket gopher workings on the grassy open slopes, to which they seem restricted. Only pocket gophers, of all the rodents, according to Dr. Benson, can exist

Riemer
1948

Journal

28 Feb. Strawberry Canyon, U.C. Campus, Berkeley
Alameda Co., Calif.

in the short-grass areas since insufficient cover of above surface runways of other rodents. Other should be found in higher grassy tufts about shrubs and bushes. *Artemesia*, (powdery grey, lacy leaves) is plant of chaparral most often in close relation to open grassy areas. Principally found along exposed edges of chaparral. It apparently tolerates dry conditions less than grass but more than other elements of brush cover. Oaks appear higher up slopes than bays. Where great variety of plants occur along edge of brushy area is where greatest number of rodents will occur according to S. Benson. Ascend of S slope to grove of introduced pines made. Here dense shade and thick mat of needles precluded development of any grass or shrubs. Therefore very little food or shelter for rodents. Even squirrels, according to S. Benson need several species of trees in which to find enough and suitable food. Such an area as this grove, which ~~ty~~ lies just below upper part of Cyclotron road, should be quite barren of mammals. Eucalyptus grove visited next just across

28 Feb. <u>Strawberry Canyon, U.C. Campus, Berkeley, Alameda Co., Calif.</u>

highway. Because of lack of grass presumably, but very few pocket gopher mounds seen. Signs of various animals in form of burrows and cavities seen beneath rocks and logs. In thinner part of grove S. Benson "called" up several Song Sparrows from dense low cover. Tangled long grass in an ungrazed area showed numerous rodent runways and "rooms" with litter of cut grass, a characteristic of <u>Microtus</u>, said S. Benson. Said also <u>Peromyscus truei</u> found in dense dry chaparral whereas <u>P. californicus</u> plus moles and shrews chiefly in wet chaparral environments. Behind Botanical gardens Wood Rat nests seen in dense poison oak thicket and up in <u>Pinus radiata</u> grove. Group proceeded by road back to parking area starting point, by road, at 1115. After lunch return made at 1245 to Strawberry pool area. Light rain occurred between 1400 and 1415. Sun reappeared again warmly and strongly. Shelter from rain taken in old building just below pool. In a concrete lined pit 4½'

Riemer
1948

Journal

28 Feb. Strawberry Canyon, U.C. Campus, Berkeley, Alameda Co., Calif.

deep, 6-7 ft square, loose sand bottom plus various boards and litter, was found an unidentified rodent about half size of Norway rat, dead but not for too long. Fur in good condition at least on upper surface. Apparently body had been largely eaten out by insects. Dorsal surface uniform dark grey, venter, pale white grey. Hind foot 25 mm. Sandy bottom of pit thoroughly pitted as if with foot prints. Though a hole exists in one wall of pit, apparently animal could not use it for escape, and thus died of starvation or thirst. Also in pit was a thoroughly dried and completely furless rodent (identified by incisors) of size of Norway rat. Tho unidentifiable it was probably of this species. Vast quantities of rodent feces thru out building. A pile of brush similar to a Wood Rats nest, tho smaller, also in building amongst rubbish but not protected and not in close proximity to vegetation. Return to out-of-doors and several posts taken during rest of afternoon close around pool. Varied Thrush, Spotted Towhee, & Hermit Thrush observed. Small pendulant nest with opening facing upwards noted

J. Riemer

1948

Journal

28 Feb. Strawberry Canyon, U.C. Campus, Berkeley, Alameda Co., Calif.
in oak just E first telephone pole E of poultry buildings spanning road above Stadium. Nest about 8 ft. above ground and suspended from small twig; not in crotch. Since walls appear very thin nest assumed to be from last year and now unused. Hutton's Vireo seen in same spot. Observations concluded at 1645 and return to parking area.

3 Mar. Entered Canyon 1120. Western Mole and Pocket Gopher seen along road. Captured one Sceloporus along road near Cyclotron. Inspected old well above Botanical Garden ~~nursery~~ nursery. No Sceloporus about tho weather and exposure excellent. 5 other Sceloporus captured within Gardens. Return to lower campus at 1630.

6 Mar. Entered Canyon as member of Zoology 113 class, with purpose of studying Neotoma, at 0820. Suitable mound found easily, about half way up N slope and just opposite Strawberry pool. With running discourse mound dissected by Rudd, leader of group. Later, visit made to abandoned building, (mentioned in

J. Riemer
1948

Journal

6 Mar. <u>Strawberry Canyon, U. C. Campus, Berkeley, Alameda Co., Calif.</u>
Journal', 28 Feb. 1948) to inspect <u>Neotoma</u> nest in artificial surroundings. On leaving Canyon, short stop to listen to Ruby-crowned Kinglet mode. Left Canyon 1145.

13 Mar. In spite of heavy rains for past 24 hours entered Canyon at 0830 to study <u>Microtus</u> habits. Proceeded by road to slope behind Fish and Game laboratory. There plot set up and runways and burrows partially exposed. Light rains thruout morning. Study concluded at 1100. Walked by various trails from Botanical Gardens to Panoramic Way between 1200 and 1330. Heavy rain. Large numbers of earth-worms everywhere, especially in stream bed. Several slugs abroad also. Is it possible rainy weather causes nocturnal ~~cod~~ conditions in animal activity?

<u>Albany, Alameda Co., Calif.</u>

19 Mar. All times (hours) since 14 Mar. 1948 should be followed by D. S. T. indicating Daylight Saving Time.
Day clear, cold, windy. Later afternoon

Journal

19 Mar. Albany, Alameda County, Calif.
spend in watching birds in vicinity of Codornices village in Albany. Species seen: Killdeer, meadowlark, Black-crowned Heron, American Egret.

20 Mar. Lake Merritt, Oakland, Alameda Co., Calif.
Began observations of water fowl at duck feeding station 0845. Weather: clear, slightly cold, light wind, sun brightly shining and comfortably warm out of wind. Identified most of fowl observed. Spend 1½ hours in detailed observation of Coot. Extremely large number of birds present. Coots appeared most numerous with Mallards and Pintails running close second. Baldpates and Canvasbacks common. Sexual behavior prominent, seen in Mallards, Pintails, and pigeons.

Species recorded:

1. Snowy Egret
2. Canada Goose
3. White-fronted Goose
4. Snow Goose
5. Ross Goose
6. Mallard
7. Baldpate
8. Pintail
9. Canvasback
10. Lesser Scaup
11. Coot
12. Glaucous-winged Gull

W. Riemer
1948

Journal

20 Mar. Albany, Alameda Co., Calif.

After noon removed to mud-flats just W Albany Hill. Weather as noted above. Large number of birds feeding during low-tide. Limited time prevented identification of only:

1. American Egret
2. Willet
3. Marbled Godwit
4. Ruddy Duck

27 Mar. Strawberry Canyon, U.C. Campus, Berkeley, Alameda Co., Calif.

113 class assembled, parking lot N of Stadium. Began observations 0815 D.S.T. Weather: Cool, clear and sunny. Slight breezes. In parking area Purple Finch, Brown Towhee, Anna's Humming-bird seen in non-native but wet chaparral-like vegetation. E of Stadium in similar growth California Quail, Calif. Jay seen. Bushtits and Oregon Juncos among cypress + other conifers E of Stadium. Bewick Wrens in non-native shrubs about Stadium. Grassland and open surface of pool Black Phoebe seen. Wet chaparral S side of canyon Wren-tits, Orange-crowned Warbler,

Journal

27 Mar. Strawberry Canyon, U.C. Campus, Berkeley, Alameda Co., Calif.
California and Steller's Jay, Titmouse, Song Sparrow seen. Return to parking area 1145 D.S.T. Note made of differences in relative build of wings and feet. Brown Towhee, limited to open spaces and feeding on ground has feet of large size and small wings with small primaries. Black Phoebe, feeding on wing, and also Hummingbirds which feed on wing, both with large wings and small feet and legs. Both relatively solitary also perhaps an adaptation so that confusion & collision prevented in their rapid & erratic flight. Most of birds were noted to be in "edge" habitats.

3 Apr. 113 Class left Stadium parking area, walked up Canyon road to trail just below Botanical Gardens. Followed trail up, across and back down Canyon on N slope, arriving at Panoramic Way. Took ridge trail up to top of Panoramic Way then followed road and stairs back down to Stadium. Began

Journal

3 Apr. Strawberry Canyon, U. C. Campus, Berkeley, Alameda Co., Calif.
at 0815 D.S.T. and completed route at 1145. Weather: Clear, with scattered clouds occasionally obscuring sun. Fair south wind. Cold. Ground and grass wet and muddy from rain yesterday. Species seen:

1. House Finch (open country, buildings)
2. Arkansas Goldfinch (chaparral)
3. American Goldfinch (chaparral)
4. Warbling Vireo
5. Hutton Vireo
6. Golden-crowned Sparrow
7. Pine Siskin
8. Orange-crowned Warbler (wet chaparral)
9. Red-tailed Hawk
10. Wren-tit
11. California Jay
12. Anna Hummingbird.

10 Apr. Wildcat Canyon, Tilden Park, Contra Costa Co., Calif.
Left tennis courts at N end of park 0830. Proceeded N along road past Jewel Lake, crossed to W side of Canyon and proceeded N along that slope. Returned along same slope to tennis courts. Weather: Cold to cool with scattered clouds. Sun weak. Wind mild

Journal

10 Apr. Wildcat Canyon, Tilden Park, Contra Costa Co., Calif.

and blowing up canyon. Not enough to interfere with bird's activity. Route traversed eucalyptus, oak, willow, wet chaparral, tule marsh, open grassy areas. Bird life extremely abundant. Amphibians also out probably due to extensive rains ending last evening.

List of animals observed:

1. Triturus torosus
2. Hyla regilla
3. * Steller Jay (common though no conifers in area)
4. California Jay
5. Orange-crowned Warbler } common
6. Pileolated Warbler }
7. Wren-tit (chaparral)
8. Calif. Quail (chaparral)
9. Oregon Junco (eucalyptus)
10. Ruby-crowned Kinglet (willow)
12. Bush-tit (willow)
13. Song Sparrow (cattails & weeds)
14. Red-winged Blackbird (cattails)
15. Coot (water)
16. Brown Towhee } wet chaparral
17. Spotted Towhee }
18. Bewick Wren (wet chaparral)
19. Plain Titmouse
20. Red Breasted Nuthatch

1st page

10 Apr. Wildcat Canyon, Tilden Park, Contra Costa Co., Calif.

*
21. Clemmys marmorata (cattail pond)
22. Scapanus l. latimanus
23. Neotoma fuscipes annectens
24. Beaver (cattail marsh)

17 Apr. Strawberry Canyon, U.C. Campus, Berkeley, Alameda Co., Calif.

Left parking 0815 as part of 113 class. Hermit Thrush heard in Stadium area in thick chaparral. Golden-crowned heard behind Bowles Hall top of conifer. Weather: cool and overcast though bright. Light rain yesterday. No noticable wind. Allen & Rufous Hummers creating racket of squeaks from willow clump next to conifer above mentioned. Miller believes nesting activities. Purple Finches heard in all quarters. Group began ascend of "big C" trail. 0910 sun appears, overcast largely gone. Trails along slope of N side of canyon followed, thru grassy area interspersed with chaparral in tributary stream courses. In one such dry chaparral area, Wren-tit and White-crowned Sparrow noted. At main side ridge of S-facing slope two Allen Hummers raced by in hot pursuit

J. Riemer
1948

Journal

17 Apr. Strawberry Canyon, U.C. Campus, Berkeley, Alameda Co., Calif.

of each other. Mexican Bluebirds, House Finches, American Goldfinches, and Pine Siskins also seen here. Followed along road to Botanical Gardens. Weather varied between sunny and overcast throughout morning. Areas traversed during morning included wet and dry chaparral, grassland, and non-native vegetation in Botanical Gardens. List of species observed:

1. Red-tail Hawk (only after sun emerged)
2. Allen's Hummingbird (common over entire area and conspicuous. Apparently nesting time).
3. Steller Jay (willow)
4. Bush-tit (dry ~~chapparal~~ chaparral)
5. Wren-tit
6. Hermit Thrush (wet chaparral)
7. Mexican Bluebird (grassland)
8. Orange-crowned Warbler (willow)
9. Black-headed Grosbeak (non-native conifer and willow and oak)
10. Calif. Purple Finch (conifer, oak eucalyptus; extremely common)
11. Brown Towhee (oak)
12. Pine Siskin (conifers and grassland)
13. Oregon Junco (conifers)
14. White-crowned Sparrow (wet chaparral)
15. House Finch (conifers & grassland)

J. Riemer
1948

Journal

24 Apr. Wildcat Canyon, Tilden Park, Contra Costa Co., Calif. 113 Class left tennis courts at N end of park 0830. Proceeded S to ball diamond to observe in riparian willow thicket. Entire stream bed overgrown with wide belt of willows including some small, low elderberry. Observed in one spot during the hour: Brown Towhee, California Jay, Stellar Jay, Warbling and Hutton's Vireo, Pileolated Warbler, Downy Woodpecker, Anna Hummingbird, Grosbeak, Song Sparrow, American Goldfinch, Black Phoebe. Calif. Jay feeding "robin-fashion" on ball diamond lawn. Moving N along road again noted Turkey Vulture soaring overhead. Also Grosbeak flying overhead above willow thicket. In riparian willow thicket (riparian) above Jewel Lake Wren-tits observed. At Jewel Lake Redwing Blackbirds nesting behavior studied. American Goldfinch, Western Tanager, Coots, Bullock Oriole also seen. Weather warm, clear, sunny entire morning tho warmer toward noon. Breezes light. Dismissed at 1200.

Journal

25 Apr. Bolinas Bay, Marin Co., Calif.
Nests of Redwing Blackbirds examined at mouth of canyon N end of bay. Other species noted in vicinity: About 6-8 Turkey Vultures, 1 Redtail(?) Hawk, Swallows, all flying above mouth of canyon. White-crown Sparrow, Brown Towhee, ♀ Humming bird (sp?) also noted in area. Vegetation: Meadow at mouth of canyon with lowest spot marshy sedge thicket. Sides of canyon mostly oak covered. Bay water just across highway from sedges. All above species in or above meadow area except Redwings which stayed in sedges or along water edge of bay. Never in meadow. ~~Bewick Wrens~~ Wren-tits heard in oaks. Great Blue Heron observed flying low across Bay. Weather: cool, clear, sunny, moderate breezes. Observations made between 2-6 o'clock.

26 Apr. Berkeley Hills, Alameda Co., Calif.
Drove to top Panoramic Way, walked to top of first hill at head of Hamilton Gulch. There at about 1330 saw

26 Apr. <u>Berkeley Hills, Alameda Co., Calif.</u>
and captured 1 Coluber lateralis. Captured during afternoon 5 Sceloporus o. occidentalis and marked by clipping toes and with colored pencil. All lizards released. Top of hill partially mapped as part of special problem in daily activities and movements of Sceloporus. See species account for details of area. Weather: bright, sunny, clear with moderate cool winds. Other animals noted: ~~Bewick Wrens~~ Wren-tits calling from chaparral slopes, Turkey Vulture soaring overhead. Left area at 1700.

30 Apr. Study area (of Sceloporus o. occidentalis) boundaries revised and entire area remapped, (see that species. One new individual marked. Tentatively it is thought that all specimens within area inhabit all suitable parts of it. No movements checked and recorded yet but several individuals seen in several separated areas. ~~Bewick Wrens~~ Wren-tits calling from chaparral in canyons during entire afternoon. A single hawk, thought to be Sparrow Hawk, observed 1800 hovering and intermittently soaring in moderate breezes over Hamilton Gulch. Assumed

30 Apr. Berkeley Hills, Alameda Co., Calif.
perch atop conifer afterwards. On approach, took off across Strawberry Canyon.

1 May Bay Farm Island, Alameda Co., Calif.
11S class assembled 0730 at island end of bridge. Observations made between bridge and about 1000 ft. E, from road. Birds abundant on mud flats of San Leandro Bay and on marshy parts of Golf Course lawn across highway.
Observed in flight overhead:
1. Forster's Tern - six (?)
2. Barn Swallows - common
3. American Egret - one
4. Mallard - group of four
5. Great Blue Heron - three
6. Various Gulls. On mud flats:
7. Black-bellied Plover - six (?)
8. Clapper Rail - one
9. Red-backed Sandpiper - one
10. Western Willet - common
11. Hudsonian Curlew - common
12. Long-billed Dowitcher - abundant
13. Western Sandpiper - exceedingly abundant
14. Marbled Godwit - common
Out in Bay: 15. Lesser Scaup - 3
16. Mallard - 3 On Golf Course lawn:
17. English Sparrow - common
18. House Finch - one
19. Western Meadowlark - (?)

1 May Bay Farm Island, Alameda Co., Calif

20. Brewer Blackbird - common
21. Long-billed Dowitcher - 6
22. Semipalmated Plover - dozen
23. Western Sandpiper - abundant
24. Redwing Blackbirds nesting in sedges on golf course.
25. ♀ Mallard with young ducklings among sedges.

Great diversity in bill shapes of shore-birds. Sandpipers bill short and straight can only feed in very shallow water and only directly in front of feed. Dowitcher bill and legs long and straight; can feed in ~~different~~ deeper water and somewhat farther in front of feet. Curlew, bill long, downcurved; can feed much farther in front of feet. Godwit, bill long, upcurved; can ~~feet~~ feed far in front of feet and shovel along just beneath surface. All these adaptations may be ~~[illegible]~~ factors which prevent direct interspecific competition. Such competition would be exceedingly important and vital if it did exist since all species necessarily must feed at water's edge. Lack of competition probably valid since no animosity apparent interspecifically. Species said to group more when

1 May Bay Farm Island, Alameda Co., Calif.
tide incoming. (Dehnel) Probably due to automatic separation because of ability to feed in different situations, ie. Sandpipers, very shallow water; Dowitchers, deeper water; etc. Food probably largely invertebrates though Dehnel says unknown. Noted that all shorebirds tend to fly very close to water usually even though sometimes for long distances. This in contrast to land birds which generally seek altitude rapidly. Apparently little sexual dimorphism in shore-birds. Reason not known by author. Plumage changes generally to very somber tones for winter. Reason again unknown. Most breed in far North (Dehnel). Weather: warm, sunny, clear, little wind. Observations suspended at 1100

1 May Berkeley Hills, Alameda Co., Calif.
Plotting of Sceloporus movements begun 1610. See species account for particulars. New specimen captured and marked. Covy of Calif. Quail pass by in chaparral at ~~1750~~ 1730. Wren-tits calling throughout period of observation. Purple Finch singing from top of conifer. Generally bird life sparse. Observations closed at 1800. Apparently necessary to devise new method recording data for this study.

5 May Berkeley Hills, Alameda Co., Calif.
Entire day spent plotting movements of Sceloporus in study area. Begun 0825, quit 1630. Special attention paid to one large ♂ which moved over most of study area while all others tended to stay close to one spot. Weather: clear, bright, sunny, warm, no clouds, no breeze until 1500 when light intermittent ones arose. Birds singing and calling all day in contrast to last day in area. Species noted: Microtus feeding on surface throughout day; Odocoileus passed area 1045; Turkey Vulture seen twice during morning; a hawk perched atop same tree, 1320, observed on 30 Apr. 1948 flying off again when assailed by small birds; Purple Finches calling from conifers; Wren-tits from chaparral; Pine Siskins, 1355, circling out from conifers. "Orange stripe" Thamnophis ordinoides atratus taken in study area.

8 May 1 mi. WNW Concord, Walnut(?) Creek, Contra Costa Co., Calif. Left Albany by car 0800. Present Wade & Margery Fox, wife and self. Proceeded on U.S. 40 and Calif. 4 to vicinity Concord. 0915 at above location captured 1 Sceloporus o. occidentalis, 1 Pituophis c. catenifer, 1 Thamnophis sirtalis

Journal

8 May 1 mi. WNW Concord, Walnut(?) Creek, Contra Costa Co., Calif. intergrade between infernalis and tetrataenia (according to W. Fox). Situation: marshy, cattail stream bed thru open cultivated fields. Weather: cool, clear, sunny. All three specimens under debris and sluggish. 20 minutes spent in area. Continued to

8 May Mitchell Canyon, near Clayton, Contra Costa Co., Calif. 0945 – 1030 Search revealed no Thamnophis. 1 Gerrhonotus m. multicarinatus taken. Weather: cool, clear, sunny. Situation: riparian willow principally. Object of this and following days trip to collect possible intergrading forms of Thamnophis.

8 May Antioch Toll Bridge, Calif. #24, Contra Costa Co., Calif. Kirker Pass Road to Antioch and Calif. #24 to Bridge. About 1 hour search along edge of levee disclosed no snakes. Sceloporus and Gerrhonotus occasional. Situation: tules, cattails and sedges, Thamnophis gigas expected. Weather: cool, clear, sunny. Marsh Wrens, Song Sparrows common. Cliff Swallows abundant, Barn Swallows occasional. Nest under Bridge.

8 May 0.5 mi. E Denverton, Solano Co., Calif. Calif. #24 and #12 to above location.

8 May 0.5 mi. E Denverton, Solano Co., Calif.
About ½ hour search showed no Thamnophis. 1 large Pituophis c. catenifer taken under wood box. Situation: Short stand of swamp grasses and sedges over very damp soil. Water apparently brackish. Weather: cool, clear, sunny. Many Cliff and few Barn Swallows nesting under low concrete bridge. Several photos taken. (See Roll #20).

8 May 1 mi. NW Batavia, Solano Co., Calif.
Calif. #12 and U.S. 40 to Vacaville, hence Elmira, Batavia and U.S. 40 again. Pond ~~near~~ between Elmira and Batavia no longer present. On U.S. 40 at above locale a swampy stream contained many Rana catesbiana. 1 Bufo boreas halophila taken. Search revealed no Thamnophis. Sceloporus here seem confined to small concrete bridges etc. though they seek shelter under object and among tules on soggy ground.

8 May Putah Creek, 70 ft. 6 mi. N Dixon ~~Dixon~~ (Solano Co.) Yolo Co., Calif.
U.S. 40 through Dixon to Creek. Search revealed no Thamnophis. 1510, 1 young Gerrhonotus m. multicarinatus and 1 Thomomys sp.? taken about rubbish piles.

8 May Putah Creek, 6 mi N Dixon (Solano Co.) Yolo Co., Calif. Gerrhonotus crushed and spoiled during remainder of trip; Thomomys died during night and therefore distroyed. Gopher was struggling thru grasses when found at 1570. Apparently injured though possibly diseased. Pelage of more golden-brown than East Bay form.

8 May Putah Creek, near junction of Napa, Yolo and Solano Cos, Calif. (Calif. #28 to location.) Search revealed no Thamnophis. Huge rocks at streams edge in one spot, used by hundreds of Cliff and Barn Swallows. Many nests within easy reach though most attached so as to be above water. Obviously a factor for selective adaptation? Appeared to be excellent place for study of these species. Many nests still under construction. Continued on Calif. #28 and Soda Creek Rd.

8 May & 9 May 6.5 mi. SSW Monticello, Soda Creek, Napa Co., Calif. Camped overnight at this spot. In evening captured 2 Rana b. boylii, 1 Hyla regilla, 6 Triturus torosus. 2 of Triturus when captured in amplexus. The 2 Rana found in amplexus next day on trip home. Slopping of water by movement of car apparently did not disturb them.

Journal

8 May & 9 May 6.5 mi SSW Monticello, Soda Creek, Napa Co., Calif. About 0930, morning of 9th captured 2 Thamnophis o. atratus ("orange stripe" – W. Fox) sunning on flood debris, 1 Crotalus viridis oreganus near water. Weather: cool but rapidly warming, sunny, clear. Situation: riparian chaparral. Birds extremely abundant and situation well suited for bird watching.

9 May Pope Creek, 5.7 mi. NW Monticello, Napa Co., Calif. Two hours search gave one large Thamnophis, one Coluber lateralis, one Gerrhonotus multicarinatus, one Eumeces skiltonianus. Weather and situation same as above location though warmer.

9 May 2 mi. SE Knoxville, Eticura Creek, Napa Co., Calif. 1 Clemmys marmorata, of many present, taken. No Thamnophis. Situation: oak and grassland. Weather: cool, cloudy.

9 May 7 mi. SE Knoxville, Eticura Creek, Napa Co., Calif. No Thamnophis in 2 hours search. No Clemmys seen in that period either though no real difference in situation detected. Weather: same as above. Returned home on Calif. #28, #37, #29 and U.S. #40. Returned about 1800

12 May Berkeley Hills, Alameda Co., Calif. 0830 to 1545 spent in Sceloporus study area.

12 May Berkeley Hills, Alameda Co., Calif. Morning overcast clearing toward noon. Warm only during afternoon. Large ♂ which wandered over all territories during last study period (5 May) missing. Observations today only indicate other individuals confined to rather small areas within study area. Species noted: one Coluber constrictor mormon in study area. Turkey Vultures, singly and in pair overhead in late morning and early afternoon (1100 to 1320). One feral house cat (white & black) seen twice in area. Purple Finches and Pine Siskins very common in conifers adjacent to area. Oregon Juncos nest located in conifer clump.

15 May Wildcat Canyon, Tilden Park, Contra Costa Co., Calif. Leader of third group of 113 class. Search at lower end of Park, along stream and wooded slopes revealed: Hyla, Rana aurora, & Triturus in the water; Batrachoseps, Sceloporus, Thamnophis on slopes. Triturus egg masses located in all stages of development. Period of observation: 0845 to 1130. Weather: warm, sunny, clear.

17 May Head Hamilton Gulch, Berkeley Hills, Berkeley, Alameda Co., Calif.
Afternoon spend in Sceloporus study area. Weather cool and partially cloudy. Winds moderate. At least two Turkey Vultures noted. Species abundant only this year?, or only this season?, or are they more common than listed by Miller and Pitelka in Campus Bird List. Oregon Junco nest noted last time in this area, deserted.

22 May Wildcat Canyon Tilden Park, Contra Costa Co., Calif. Observations of 113 Zoology class begun 0830. Weather: sunny, clear, warm becoming hot toward noon. Great number of birds singing thruout morning. Almost all of observation along stream though not within riparian zone. Following species noted: Eucalyptus - House Wren, Lazuli Bunting, Black-headed Grosbeak(?); oak - Grosbeak, House Wren, Swainson Thrush, Brown Towhee, Western Tanager, Cedar Waxwing; wet chaparral - Swainson Thrush, Song Sparrow; weed covered open areas - Lazuli Bunting, Song Sparrow; riparian willow - American Goldfinch, Black Phoebe. Apparently some migration still going on

Wildcat Canyon, Tilden Park, Contra Costa
22 May Co., Calif.- and most of summer visitants apparently here. Waxwings only winter visitant yet here and have probably become resident. Observations closed at 1130.

22 May Head of Hamilton Gulch, Berkeley Hills, Berkeley, Alameda Co., Calif. Observations begun 1400 in Sceloporus study area. Weather hot at time and little activity. On first round of area one Coluber lateralis frightened up. This is second one in area. Supposedly rare from Berkeley Hills. Failed to capture animal though very much would have liked to. A new race may be represented here. Time: 1410. By ~~1400~~ 1600 heat of day past though still warm. At 1645 Coluber constrictor mormon brought to attention by actions of Red-back. Snake captured. At 1745 another mormon of same size (about 24 inches) noted in grass just 6 ~~2~~ feet from spot first one found. This specimen also captured. Both removed from area to keep down predation of Sceloporus in study area. Noted that ♀ California Purple Finch also sings from tops of conifers adjacent to area but song less intricate and of shorter duration than that of male. Olive-sided Flycatcher heard. Observations suspended at 1837.

J. Riemer
1948

Journal

Camp Curry, Yosemite National Park,
26 June Mariposa Co., Calif. Wife and I, and Robert Stebbins family began vacation trip to Yosemite. Objective: recreation and collection of some of herps peculiar to area of Park. Especially anxious to obtain Hydromantes platycephalus, Sceloporus occidentalis taylori Bufo canorus. Route: Left U. C. Campus, Berkeley, Alameda Co. at 0900. Using two cars, proceeded via State Hwys 24, 21, U. S. Hwys 50 and 99 to Modesto where stop over from 1200-1300 made for lunch. U. S. Hwys 99 and State Hwy 140 followed to Yosemite reaching Valley floor at 1800. Camp set up in Public Camp #14. Weather: Cool in early part of morning in coastal areas, very hot during midday in central valley, cooler again in Park.

28 June Two Thamnophis taken in Tenaya Creek above Mirror Lake while several of party fishing in area.

Riemer
1948

Journal

Camp Curry, Yosemite National Park,
28 June Mariposa Co., Calif. .... Though some search made under logs and other forest debris no herps seen. Many numerous granite boulders in area seemingly ideal for Sceloporus; but none seen. Weather: warm to hot.

29 June While fishing in area just up-stream from yesterday captured one small Thamnophis, saw one large snake swimming in creek, thought to be a Pituophis though may possibly be a very large T. o. couchii. Much searching in what appeared perfect situations revealed no herps. One Sceloporus seen on granite boulders. Stebbins thinks nice series of Sceloporus might be taken in Tenaya Canyon ranging from S. o. occidentalis and S. o. taylori.

1 July During recreational hike to Vernal Falls captured two of three Sceloporus seen. All S. g. gracious and present only in spots apparently

W. Riemer
1948

Journal

Camp Curry, Yosemite National Park,
1 July Mariposa Co., Calif.
well supplied with sun during day.
The two animals were near the summit of the trail. Stebbins claims to have seen S. occidentalis at lower levels of trail during morning. Herps not abundant. During afternoon, well mangled Lampropeltis m. multicincta found at edge of water, upper end of Mirror Lake. Weather: warm, clear, sunny all day.

2 July Ascent of Tenaya Canyon made for purpose of checking on presence of population of Hydromantes at base of Clouds Rest. Approach to spot mentioned in Adams, Lowell (1942) seemed impossible because of precipitous nature of walls of upper canyon. Snow present yet just below altitude mentioned by Adams but search under all movable rocks close to snow bank revealed no salamanders. Search not extensive though situation did not appear exactly right.

W. Riemer
1948

Journal

Camp Curry, Yosemite National Park,
Mariposa Co., Calif.

2 July Thinner rocks had warmed through from heat of sun. Most all rocks directly on gravel substrate rather than on rock substrate. Only salamander uncovered during entire trip was an adult Ensatina. Very few Sceloporus seen during day. One taken. Had hoped to get series of intergrades between biseriatus and taylori. Two Crotalus viridis seen during day. One in damp shady fern over-grown flood bank, the other in rocky shady talus. Both escaped. One Gerrhonotus seen by Stebbins in rocky area near river. One Thamnophis o. couchii taken just above Mirror Lake. Tenaya Canyon beyond Snow Creek Falls trail is passable, though not easy, on northern side of stream up to 5250 ft. Beyond this elevation it appeared impassable at current water level which is high.

W. Riemer
1948

Journal

Camp Curry, Yosemite Natl Park, Mariposa Co., Calif.

6 July Bob Stebbins and I drove to Tuolumne Meadows on Tioga road yesterday afternoon. Road not difficult. Spent night with Allen Waldo—Ranger-Naturalist. Started at 0500 for Upper Mt. Lyell Base Camp about 12 miles. Reached spot shortly after 0900. Trail easy. Collected series of Hydromantes platycephalus on rocky slopes above meadow in which Camp situated. This thought to be type locality. Animals occur under granite rocks with soil and root mat beneath. All specimens collected in small area. Other suitable spots examined yielded no animals. See R. Stebbins field notes for particulars of this days collecting. Returned same day to Tuolumne Meadows. Drove back to Yosemite Valley next morning. While at Tuolumne met and received gift of Bufo canorus

W. Riemer
1948

Journal

Camp Curry, Yosemite Nat'l Park, Mariposa Co., Calif.

6 July from Mary V. Hood — President L. A. Audubon Society.

9 July Left Yosemite and returned to Berkeley via State Hwy 120. Picked up on road were 1 Charina bottae, 1 Coluber lateralis, 1 Barn Owl, all DOR's.

State Hwy 33, Central Valley, Calif.

19 July Wife and I began vacation trip to Southern Calif. Incidental objectives: 1.) Collection of Cnemidophorus for water absorption experiments, 2.) Search for Hydromantes on top of San Gorgonio, 3.) Determination of night road collecting possiblities on State H'wy 33. Left Oakland 1230 in own car. Drove with intermittant stops until just before noon following day. Route followed: U.S. 50, State Hwy 33, U.S. 399 and U.S. 101 to Los Angeles. In afternoon 20 July continued trip

W. Riemer
1948

Journal

19 July State Hwy 33, Central Valley, Calif. to Newport Beach. Animals noted: 1 Pituophis taken in Fresno Co., 1 Pituophis (DOR) seen in Merced Co. (see the species account). Many water birds — herons, egrets, swallows — seen about marshy areas and canals in Stanislaus Co. State Hwy 33 S to Mendota is through cultivated farm land and not particularly suitable it seems for night road collecting. S of Mendota to Taft the area traversed at night this trip appeared exceedingly barren. It is doubted if collecting is ever very profitable. Only single specimen — Pituophis — seen during entire night. A factor likely affecting the take is ~~that~~ a full moon was shining brightly. Weather was warm and windless and seemingly ideal for reptiles. Road should be checked again when moon not out.

W. Riemer
1948

Journal

U.S. 399, Ventura Co., Calif.

20 July This road covered on morning of date. Traverses a seemingly Lower Sonoran zone though Pseudotsuga were frequent at higher spots. Ground cover chiefly of sage, and similar desert growth averaging about 3 feet in height. Area rocky and in places sparsely vegetated. Brush rabbits and mice on road very common. May be very good road for night collecting of reptiles. Arrived close to noon at my home in Los Angeles. Continued on to Newport Beach that same afternoon.

26 July Newport Beach, Orange Co., Calif.

During stay at beach between this date and one above most of time spent in recreation. Following birds observed at following locations during this period.

Upper portion Newport Bay –

1. Black-necked Stilt – common

W. Riemer
1948

Journal

26 July Newport Beach, Orange Co., Calif.

2. Least Tern - abundant
3. Belding Sparrow(?) - common
4. Great Blue Heron - common
5. American Egret - common
6. A Curlew
7. Sandpipers (sp?) - abundant

Mudflats mouth of Santa Ana River —

1. California Clapper Rail - common
2. Long-billed Curlew - common
3. Marbled Godwit - common
4. Dowitcher - common
5. Willet - very abundant
6. Sandpipers (sp?) - common

On this date a single Gerrhonotus multicarinatus taken under a damp blanket in pure chaparral above Laguna Beach. Also a series of Bufo boreas — half-grown — taken in Laguna Canyon. (See species account).

29 July Riverside, Riverside Co., Calif.

Vacation under hospitality of Dr. L. J. Klotz and family continued at their Riverside home. Move from Newport Beach

W. Riemer
1948

Journal

29 July Riverside, Riverside Co., Calif.
to Riverside made on 27 July.
On this date Jerry and Joe
Klotz and myself attempted
ascent of San Gorgonio.
Because of miscalculated
length of trail - actually about
10 miles each way - the
summit was not reached.
However, no sign of habitat
suitable for Hydromantes
was seen though ascent
continued to 10,100 ft. No
snow visible, nor did
it appear that enough water
could be present to support
this species near summit.
Sceloporus graciosus abundant
at all but higher elevations
about trail. One taken.

30 July During hour prior to sunset and
until dark, search made of
wash and adjacent area for
Cnemidophorus. Locality: S of
Box Springs Grade road, 3.5 mi.
ESE Riverside, Riverside Co. Rodent
scratchings in wash very numerous.
In spots where soil so loosened

W. Rieman
1948

Journal

Riverside, Riverside Co., Calif.

30 July marks which were thought to be those of Cnemidophorus were common. Such marks consisted of a simple track as if tail dragged in straight line through sand. No accompanying footprints were apparent. As darkness settled several very small Uta's seen. No Cnemidophorus. Cottontails were often flushed from under bushes.

31 July Thinking that Cnemidophorus may be abroad during warmer part of day seach of above mentioned wash made in later hours of afternoon. Again cottontails numerous, a number of Utas out all of which very small. One was taken. While unnoosing specimen, a Cnemidophorus was seen nervously moving away under dense cover of grass and twigs. No chance for capture was available. Continued search revealed no other specimens in similar situations. A single Sceloporus

W. Riemer
1948

Journal

Riverside, Riverside Co., Calif.

31 July noosed at edge of highway while returning to car. Note made that in this extremely arid desert-like area the only Sceloporus seen was on one of few rocky extrusions about. Uta on other hand only seen in proximity of scrubby growth in wash or on slopes but not about rocks. Uta far more common in wash than on slopes. Suspected that Cnemidophorus confined largely to wash also since no tail tracks noticed in loose soil on slopes.

9 Aug. Berkeley, Alameda Co., Calif.

2 Aug. wife and I moved to Los Angeles for weeks stay with my folks. 8 Aug. began return trip to Bay Area via U.S. 101 and State Hwy 1 beginning at Las Cruces, Santa Barbara Co. Night spent at Morro Bay State Park, San Luis Obispo Co. This park apparently a bird refuge. 9 Aug. trip completed to San Francisco via State Hwy 1.

W. Riemer
1948

Journal

29 Aug. Marin Co., California
Robert C. Stebbins and family and myself and wife drove to Marin Co. via Richmond ferry with purpose of dissecting burrow system of mountain beaver, *Aplodontia*, to see if any amphibs could be discovered. Permission to dig in area where beavers known to occur could not be obtained in time available. It is hoped permission can be obtained for some future date. The locality is W of Inverness. On return trip stop made in Samuel P. Taylor State Park where 1 *Ensatina xanthoptica-oregonensis* intergrade was taken in a *Neotoma* lodge and 1 *Triturus granulosus* taken under bark of log at stream's edge.

1949
29 Jan. Lafayette Reservoir, Contra Costa Co., Calif.
Search for several hours along NW side of reservoir. Gently sloping grass covered (dry grass — new grass just sprouting) slopes. Willows and

W. Riemer
1949

Journal

29 Jan. Lafayette Reservoir, Contra Costa Co., Calif. sedges along edge of water. Weather: mild, sunny. Two adult ♀♀ *Triturus*, one juv., two ad. ♂♂, one in breeding condition found in one cavity at mouth of rodent burrow under large plank. About 100± ft. from water, 50± ft. above water. Milkweed and grass. Soil loose and damp. ¶ One ad. ♂ in breeding condition under plank 75 ft. from water and 50 ft. from above locale. ¶ Two non-breeding ♂♂ together under plank. One juv. alone under plank. Conditions same as above. Water immediately below these points (all close together) showed no signs of egg clusters. Water does not appear suitable. Silty, sandy bottom, rather cloudy. Little submerged debris. Water level had been lowered until 3-4 ft. between water and nearest vegetation at closest point.

29 Jan. Upper San Leandro Reservoir, Contra Costa and Alameda cos, Calif. Various suitable appearing spots along streams about to enter reservoir

W. Riemer
1949

Journal

29 Jan. Upper San Leandro Reservoir, Contra Costa and Alameda cos, Calif. examined. Though water quiet and ideal appearing no Triturus seen.

3 Feb. Pinehurst, Contra Costa Co., Calif. Because of mild rain during evening, toured road between Orinda and Eastport. Not raining at time except for short distance beyond Pinehurst, where it rained very hard. Triturus moderately abundant on rd. and seemingly uniformly distributed, except absent in elevated areas. Purpose of trip to determine if numbers more concentrated at any particular part of area. No such determination seemed possible. Tour made between 2430 and 0200. ¶ During late afternoon examined entire course of stream from above John Hendrickson's study area to a quarter mile below rd. fork. No Triturus or egg clusters seen although many spots appeared ideal. Decided to set up two study areas, one in redwoods between Stebbins' and Hendrickson's areas, one ~~in~~ just

W. Riemer
1949

Journal

3 Feb. Pinehurst, Contra Costa Co., Calif.
below road fork, in better looking area.

5 Feb. Large portion of day spent mapping area in and about Stebbins' and Hendrickson's study areas, however all efforts unsuccessful because of non-functioning compass. Two *Triturus* marked in Stebbins' area. Had rained heavily on 4 Feb. so that stream deep, muddy and turbulent. No possibility that eggs could be present and survive. No Triturus seen near stream though many DOR's on road.

12 Feb. With good compass, portion of area mapped at 30 ft. to the inch. Road alignment used as base. Extremely cold. Ice in rain guage. Stream not checked for *Triturus* since thought to be too cold, muddy and turbulent yet.

19 Feb. Mapping continued, most of ~~eastern~~ northern 300 ft. of area finished on road side of stream. Weather during past week warmer than usual this season. At 1630 ~~at~~ air temp. 6 in. above ground 10.7°; water in

W. Riemer
1949

Journal

19 Feb Pinehurst, Contra Costa Co., Calif.
midcurrent 6.9°. Stream has receded to about normal since no rain during past week. Water very clear, not turbulent. Seemed quite suitable for *Triturus* though but few minutes spent searching and none seen. Many *Ensatina* seen under surface boards.

22 Feb. About 1030 - 1200 spend searching stream below bridge for *Triturus*. 2 ♀♀, 7 breeding ♂♂ marked. Localities plotted on very rough sketch map and also spotted on ground with red wax crayon. Neither of ♀♀ in water, but none of ♂♂ out of water. Many "ideal" looking pools without *Triturus*. # 07 & 08 when found were facing each other while resting on bottom of pool and several inches apart. They approached one another, seemed to touch each others snouts with that structure and after few minutes both turned in different directions and proceeded off. No animosity at all evident. On return to car one young ♀ taken on road

W. Riemer
1949

Journal

22 Feb. Pinehurst, Contra Costa Co., Calif.
just within mapped area. Walking in broad daylight (raining) parallel to and on road. Survey of about half of stream above bridge for about 3/4 hour revealed only one animal, that a ♂(?) but not yet in breeding condition. Weather: overcast with light rain starting at 1145 and continuing on at least until 1430 at which time area left. Water temperature: 9.6°, air: 12.0°. 11 animals marked. R. Stebbins reports several pair Triturus per pool in stream of Briones Valley on 20 Feb. 1949. Joe Gorman, grad. student, MVZ, reports large numbers in Pinole Creek on same date.

26 Feb. 1300–1700 spent in area. Temp: air 8.6°; water 9.0°. Stream up again due to rains since 22 Feb. 1949. Water turbulent and rather muddy. Weather: Overcast and raining entire afternoon. Sheet 1 of mapping completed. Only single Triturus marked. Stebbins reports 4 seen in his area under

J. Riemer
1949

Journal

26 Feb. Pinehurst, Contra Costa Co., Calif.
surface litter. Stream not examined because of muddy condition and rain. Animal marked was walking across duff toward (?) stream on N side of road. Road carefully examined but no specimens seen. Many DOR's.

5 Mar. 1220-1700 spent in area. Temp: air 10.5°; water 8.8, at 1230. Weather: rained intermittently in Berkeley all week. 1.65 in. recorded here. Stream considerably swollen and cloudy. Overcast, with sun breaking through occasionally. Sprinkled lightly several times. Mapping below bridge well under way. Also began Sheet 2 in upper area. Two new animals marked. #09 recaptured at original site. Very few DOR's on road.

12 Mar. 1200-1700 spent in areas. Temp. 1545: air 12.4°, water 10.4°. Weather: heavy rains all through past week; today mostly high overcast with very short spells of sun. Stream very much swollen and turbulent.

W. Riemer
1949

Journal

12 Mar. Pinehurst, Contra Costa ~~Costa~~ Co., Calif.
In spite of flood conditions 2 ♂♂ known to have been in water. One amongst tangle of small roots at edge of bank. 5 animals marked. Most of time spent mapping. Sheet 2 all complete except for trees. More of lower area mapped.

14 Mar. Tilden Regional Park, Contra Costa Co., Calif.
Many *Triturus* in Wildcat stream at lower limits of park. Examples taken show many characters in common with both *torosus* and *granulosus*. Breeding activity in full swing. Juveniles and sub-adults and a few adult ♀♀ quite far from stream under logs, bark, etc. 3 ♀♀ and 3 ♂♂ brought to laboratory. One additional subadult with extremely pigmented eye brought to lab. also.

19 Mar. Pinehurst, Contra Costa Co., Calif.
1200-1630 spent in area. Temp. at 1410: air 12.4°; water 10.8° C. Scattered clouds with intermittent sun and overcast. Extremely heavy rains during preceding

W. Riemer
1949

Journal

19 Mar. Pinehurst, Contra Costa Co., Calif.
night caused stream to be very much swollen and extremely muddy. Stream course was ~~thorou~~ thoroughly flushed. 3 new animals taken in area Sheet 1 and one recapture. Sheet 2 completed.

25 Mar. Tilden Regional Park, Contra Costa Co., Calif.
0830-1000 spend in search for Triturus of both sexes and eggs in Wildcat Creek at NW end of park. Water lower than 2 weeks previous but still too murky to see in depths over 4-5 inches. ♂♂ very common. At almost any point of stream where flow suitable one or more ♂♂ could be seen. Only 6 ♀♀ found during that period. 3 egg clusters also taken and appear to be underdeveloped.

25 Mar. M.V.Z.
Succeeding in isolating hypophysis and implanting into another animal. Gland reached by cutting away roof of cranium and lifting out brain. Then gland found lying in depression in

W. Riemer
1949

Journal

25 Mar. M.V.Z. ~~Pacheco, Contra Costa Co., Calif.~~

cranial floor as pinkish blob. After severing connections with needle, can be removed with pipette. Implanted into gular region just anterior to heart ~~by~~ by inserting into cavity made under skin. In this case a breeding male was donor and a gravid ♀ host. Both had been in lab for 2 weeks. Purpose of operation only to establish technique of procedure. Also attempted with another ♀ to cut into body cavity, remove eggs and sew back up. Ovaries very poorly developed. In sewing back up the following found to be best procedure. Use single nylon thread and tie off each stitch individually. Animals narcotized for operations with 1 cc saturated solution chlorotone in ½ strength C.B. Ringers. Solution injected interperitoneally

26 Mar. M.V.Z.

Host of hypophysis implant appears in normal condition today.

W. Riemer
1949

Journal

26 Mar. Pinehurst, Contra Costa Co., Calif.
1200 - 1730 in area. Weather: clear and sunny. Temp. at 1255: air 14.8°; water 10.2°. Stream level down and murky only in deeper pools. Current very swift and but few suitable spots in upper area seen. Of 4 animals, 2 new and two returns. Further mapping in lower area ~~completed~~ carried out. Triturus not common even in open areas below study plot.

28 Mar. M.V.Z.
One or more of ♀♀ taken at Tilden 25 Mar. laid eggs in aquarium during weekend and this morning. Eggs collected at Tilden (except cluster which was exposed in air) developing. All eggs in clusters though animals in that region of Tilden suspected of being hybrids of _torosus_ and _granulosus_.

29 Mar. ♀ implanted with hypophysis 25 Mar. laid eggs in several broken clusters this date.

W. Riemer
1949

Journal

2 Apr. Pinehurst, Contra Costa Co., Calif.
1230-1640 spend in area. Weather: clear, cool, sunny. The same all during past week. Temp.: air 16°; water 11° at 1415. In covering upper area once 9 animals taken, 1 a recapture juvenile, 5 adult ♀♀ (2 being amplexed, 2 laying eggs), 2 adult ♂♂ both amplexing. All, but one of laying ♀♀, in quiet water of pools certain to remain longest i.e. deepest. Eggs being laid and already laid in at least 3 spots. These are first eggs seen in area. Stream lower than last week and quiet pools only slightly murky at bottom. Otherwise water very clear.

2 Apr. M.V.Z.
Eggs taken at Tilden 25 Mar. developing except cluster which was out of water when found. It soon developed fungus(?) covering and distroyed. Also eggs laid in aquaria developing. All ♂♂ appear to lose breeding features (i.e. smooth skin, pale color etc.) in aquaria.

W. Riemer
1949

Journal

8 Apr. M.V.Z.

13 Triturus taken in Tilden Regional Park, Contra Costa Co. and in captivity since 25 Mar. were subjected to injections of hog pituitary anterior lobe extract in following pattern: 7 (♂♂ + ♀♀) each injected with 1 cc extract suspension. 6 (♂♂ + ♀♀) each injected with 1 cc Cold-blooded Ringers, as controls. Animals under identical conditions in adjacent aquaria. Suspension compounded as follows: 4 gms dry extract ground into suspension and diluted with C.B. Ringers to make 50 cc solution. Each 1 cc injection therefore equal to .08 gms dry extract. Injections made with large needle into peritoneal cavity. Following table indicates dosage data

Date & hour	Amount	Exper.	Controls	Remarks on experimentals
1145 08 Apr.	1 cc	Extract	C.B.R.	
1000 09 "	"	"	"	1 experimental escaped
1730 11 "	"	"	"	stringy cloacal discharge
1145 12 "	"	"	"	highly vascular ventral surfaces
1500 13 "	"	"	"	cloaca on one ♂ + one ♀ much swollen

14 " 2 experimental died

great deal of skin shedding by experimentals! Some controls developing brown tipped tubercles.

(See 15 April 1949)

W. Riemer
1949

Journal

Pinehurst, Contra Costa Co., Calif.

9 Apr. 1130-1530 spent in area. Weather: clear & sunny today and all week. Stream level still dropping gradually. Temp; 1335: air 20° C, water 11.8° C. 12 new *Triturus* marked in both areas, 2 returns. Few more egg clusters seen than last week though in no new spots. ♂♂ seem to be losing pigment on soles and thighs.

12 Apr. M.V.Z.

Eggs of *Triturus* gathered 25 Mar. and apparently undeveloped began hatching today. Entire development since collection at room temperature. Dorso-lateral stripes indicate *torosus* nature.

15 Apr. MVZ

Experiments with injection mammal extract pituitary hormone completed. Conclusions: Dosage used (8 Apr. '49) caused extensive vascularization and inflamation of ventral surface plus severe swelling of cloaca in some. Ovulation and sexual activity induced were zero. These results in agreement with other similar workers findings.

W. Riemer
1949

Journal

16 Apr. Pinehurst, Contra Costa Co., Calif.
1215 - 1600 spent in area. Weather, as during past week, clear and sunny. Stream level down some more. Water in pools clear and quiet. Temp. at 1250: air 16.6; water 11.4. 8 Triturus taken and 1 additional seen in stream. 5 of 8 newly marked (3 ♂♂ - 2 juveniles). 3 recaptures from last week (2 ♀♀ - 1 juvenile). All in lower area. ♂♂ tend to be losing breeding characteristics of pigmentation and form. Two adults noted (DOR) on road ~~and~~ may represent return to upland areas before ground dries too thoroughly.
28 clusters now noted in area.

23 Apr. 1130 - 1440 spent in area. Weather, as during past week, clear and sunny. Stream level gradually dropping. Even deepest pools clear. Few areas of rapid current left but stream generally quiet or with moderate currents in narrow channels. Temperature at 1415: air 18.4, water 13.6. 11 Triturus taken. 9 new (4 ♂♂, 1 ♀♀, 4 juveniles); and 2 returns. 1 ♂ returns last taken

W. Riemer
1949

Journal

23 Apr. Pinehurst, Contra Costa Co., Calif. on 22 Feb. This suggests ♂♂ may remain for several months in water in breeding season or may leave and return. ♀♀ taken under wood on land may represent return to terrestrial habitat. Noted that juveniles first appearing in numbers now. All Triturus taken from lower area except 3 juveniles. All sexual pigments on soles, thighs, etc. gone on ♂♂. Dorsum becoming darker and tail fin reduced. Most egg clusters developing to elongate stage but no eyes or other pigment yet apparent. 1 Diadophis amabilis, DOR, near road junction above lower area.

Apr.-1 May San Luis Obispo Co., Calif. Marjorie and Wade Fox, Keith Murray, wife and I left Berkeley 1700 29 Apr. Drove to Coalinga via Hollister arriving 2400. No reptiles on road though moon absent and not too(?) cold. 30 Apr. collected (1.) Estrella R., Shandon; (2.) Salinas R., Paso Robles; (3.) also Salinas R. on Santa Margarita - Pozo road. (1.) Hyla and R. catesbiana common. Small series B. attenuatus taken. Sceloporus and Uta common. Thamnophis, for which intensive

W. Riemer
1949

Journal

29 Apr - 1 May <u>San Luis Obispo Co., Calif.</u> search made appear scarce. 1 juvenile seen. Beaver workings, Anthony Green Heron seen.
(2.) Small series <u>B. boreas</u> juveniles taken. Large concentrations <u>B. boreas</u> larvae feeding on Spirogyra. All larvae died quickly enroute home. No <u>Thamnophis</u>. (3.) <u>Hyla</u> & <u>Batrachoseps</u> taken but lost enroute home. <u>Sceloporus</u> and <u>Eumeces skiltonianus</u> seen. Beaver workings, Yellow-billed Magpie noted. No <u>Thamnophis</u>
Returned Berkeley 2100 1 May

7 May <u>Pinehurst, Contra Costa Co., Calif.</u>
1400 - 1600 spent in area. Weather, clear, sunny, warm. Stream level down. Temperature 1545, air 19°C, water 14°C. 5 animals taken, 2♂♂, 3 juveniles. 2 of juveniles new. Egg clusters well developed. All observed, at very elongate stage. No close check made but apparently some clusters have disappeared. One cluster at surface of water.

15 May 1310 - 1620 spent in area. Weather, as during much of past week, heavily overcast. Had been some rain recently probably preceding night. Temperatures at 1540: air 12, water 11.4°C. Stream

W. Riemer
1949

Journal

15 May Pinehurst, Contra Costa Co., Calif.
level up slightly, due to rains.
8 Triturus taken, 1 adult ♂, 7 juveniles.
4 of juveniles new animals. ~~Eggs~~ Embryos
of most advanced clusters have both
eyes and longitudinal pigment stripes.
Hatching date imminent. 1 adult
~~un~~marked animal DOR in lower
area. Noted that adult animals
disappearing just prior to hatching
of larvae. A selective factor in
operation? Nest of Western Fly-
catcher noted just below ~~to~~ upper
area. 3 ft above stream and
lodged in nook in stream bank.
4 recently hatched young. Though
young touched and counted in
presence of mother (?) she was
later seen occupying nest. Could
be closely approached before being
flushed.

18 May Because of very heavy rains last night
and today a check was made of
salamanders on road between 1915
and 2120. Temperature of air, about
12° C. 15 Triturus, 9 DOR, 6 LOR
noted during period. Also 1 Batrachoseps,
2 Aneides, 1 Ensatina all LOR.

W. Riemer
1949

Journal

18 May Pinehurst, Contra Costa Co., Calif.
Of Triturus, none marked, none of DOR's within study areas. All live animals juveniles (45–56 mm. S.-V. length) except 1 subadult (60 mm. S.-V.). Of DOR's 5 juveniles, 1 subadult (65 mm S.-V.), 2 adults of undetermined sex. Where direction of travel of animal certain recorded as follows: 1 juvenile moving toward stream, 3 juveniles and 1 adult moving away from stream. Others not determined or seemingly neither toward nor away from stream. Aneides and Ensatina seen only well after dark. Not enough animals (Triturus) seen to indicate concentration at any one point or time of night. Appears main activity at this season on part of juveniles, also tendency to move away from water. Area of road surveyed from upper end upper area to lower end lower area.

21 May 1230 – 1515 spent in area. Weather warm and clear. Temp. at 1450: air 16.8, water 12.8. Water level up slightly due to rains during week (guage shows only 0.25 inches) 3 Triturus, 2 adult ♂♂, 1 juvenile

W. Riemer
1949

Journal

21 May Pinehurst, Contra Costa Co., Calif.
taken. Eggs well developed and appear in several cases ready to hatch. Flycatchers in nest in upper area now with flight feathers in place but many areas of body still naked. Great Blue Heron in area.

28 May 1515-1800 spent in area. Temperature at 1545: air 14.2, water 13.1. Stream level down again from slight rise last week. Weather clear and warm. Only 3 *Triturus* taken; 2 adult ♂♂ (1 new animal), 1 juvenile. In short tour downstream no *Triturus* seen though many suitable pools present. Hatching of egg clusters appears imminent. Thus far only few from one cluster appear to have escaped. Young of flycatcher gone but parent still concerned over approach to nest. Many small fish appearing in stream. Predators on young larvae

04 Jun. 1230-1500 spent in area. Weather: hot and clear, as for preceding day as well. Temp. at 1245: air 29.8, water 16.4°C. Stream down considerably. Very few spots

W. Riemer
1949

Journal

04 June Pinehurst, Contra Costa Co., Calif.

with even moderate rate of flow. Two adult *Triturus* taken, both recaptures, one, a ♀ last taken in April. One *Rana boylii* marked. Good numbers of clusters now hatched and larvae seen on bottom. Appear to favor silty, rather clean bottoms in shallow water near old clusters. Apparently none of clusters in immediate vicinity of adults yet hatched. Many small fish throughout. Flycatcher nest filled with loose duff and apparently abandoned.

11 June 1445-1645 spent in area. Temp. at 1515: air 19.6, water 14.8. Clear and warm. Stream lower and flow quiet throughout. No *Triturus* adults noted at all. Essentially all larvae now hatched. Growth appears very rapid. Larvae numerous. Seem to ~~pr~~ prefer shallow water at least to 22 cm. with silty or gravelly bottom. Appear not able to tolerate any apparent current. Individuals 17 and 20 mm. long measured. Such presumably hatched last week. Newly hatched about 15 mm. Some several yards from any known clusters. Much

W. Riemer
1949

Journal

Pinehurst, Contra Costa Co., Pinehurst

11 June small life on bottom especially in gravel. All appear to have front legs. At 103.0-3.0 there were at least 6 larvae on bottom in circle of 1 ft. radius. Those now hatched for one week at least, with no yolk. Some with gut distended by food. A few in upper area with yolk and those freshly hatched in lower area.

W. Riemer
1949

Journal

15 June Enroute to southern Calif.

Left Berkeley 0830. Driving M.V.Z. truck followed Stebbins family to Mrs. Stebbins home in Van Nuys. Trip without incident. This is first leg of proposed 3 month tour of western states excluding Oregon and Washington. Objective: To gain first hand acquaintance with the several species of herps occurring in the area and determine habitat preferences of same. Trip supported by Guggenheim Fellowship in charge of R.C. Stebbins. Members of party are R.C. Stebbins - leader, E. Stebbins and myself as assistants. Arrive at Stebbins home 2020 15 June. Spent next day and half with my folks.

W. Riemer
1949

Journal

19 June Mojave River, 3 mi. N Victorville, San Bernardino Co. Calif. Left Van Nuys about 2030 (18 June) and via Mint Canyon, Little Rock, Pearblossom, & Victorville reached locality at 0100. Roads from Mint Canyon to Victorville appear good for road collecting. Temp. at 2400 (18 June) about 16° C. No moon. No reptiles. Too cold (?) Dipodomys and rabbits common. At locality Bufo californicus and Sceloporus occidentalis taken. Hyla heard. Cnemidophorus common, 1 taken. Utas present, 1 taken. Spent morning gathering series Bufo californicus larvae, form as yet undescribed. Common under algae mats at edge of stream in some spots. Also present were Rana catesbiana as metamorphosed young and large larvae.

19 June Enroute Deep Springs Valley, Inyo Co., Calif. Left above locality about 1230 driving N on U.S. Hwy 395 to Big Pine. From Big Pine E to Valley. Latter road covered during 2 hours before dark. Following herps recorded as DOR. Dipsosaurus dorsalis with 2 large eggs, 1445 hours, 2.3 mi. S junction State Hwy 6 and U.S. 395 on latter road. Coluber flagellum (red phase), 109. cm long, 18.6 mi. S Big Pine on U.S. Hwy 395.

W. Riemer
1949

Journal

19 June Enroute to Deep Springs Valley, Inyo Co., Calif.
DOR on road between Big Pine and Deep Springs School were: *Crotaphytus collaris*, situation very rocky but none of rocks large, incense bush and buckwheat present but sparse, 6.1 miles E Big Pine.
Sceloporus magister, 7.4 mi. E Big Pine.
Salvadora hexalepis, 8.3 mi. E Big Pine.
Pituophis catenifer, 10.4 mi. E Big Pine.
" " , 7 mi. W Deep Spring School.
Coluber flagellum, 5.1 mi. W. Deep Spring School.
Arrived at Deep Springs near S end Valley just at dark.

19 June Deep Springs, Deep Springs Valley, Inyo Co., Calif.
Presence of *Bufo exsul* in vast numbers apparent immediately. At least 25 present in water along 10 ft. of narrow ditch. Two *Scaphiopus hammondii* taken. Located by call.

20 June Morning spent photographing habitat of toads and collecting notes and specimens.
Yellow-headed blackbirds present as well as many red-wings.

20 June 2 mi. S Beatty, Nye Co., Nevada
Proceeding E from Deep Springs via Oasis and Nevada Hwy #3 (good, but unpaved, after Oasis) ran across thin but very extensive *Yucca* stands in Nevada. Largely confined to alluvial fans. Spent about half hour in various places

W. Riemer
1949

Journal

20 June 2 mi. S Beatty, Nye Co., Nevada

looking for Xantusia vigilis. None found nor any signs, eg. cast skins. Termites present in one log in large numbers but entire situation almost powder dry. Is this too dry for animals to expose themselves. Questions arose as to nature of toads, if any, at Oasis, Mono Co.; water is present, and also in Eureka Valley to S of Deep Springs. Valley larger than Deep Springs Valley and Indians lived there at one time though actual presence of water is not known by Mrs. Campbell of Deep Springs School. Also it is not accessible by car through Soldier Pass from Deep Springs Valley. Proceeded S on U.S. Hwy 95 to Beatty. Creosote bush begins to appear at 4 mi. NE Beatty. This probably marks boundary of range of many desert forms of herps says Stebbins. Picked up Rhinocheilus lecontei just N of Beatty in early evening and a Bufo boreas nelsoni at locality. Camped at locality for night.

W. Riemer
1949

Journal

21+22 June Beatty, Nye Co. to about 20 mi. NNE Ely, White Pine Co., Nevada. Drove N and E to this spot via Tonopah, Warm Springs, Currant and Ely. Two days involved in roadside collecting. See R. Stebbins journal for details. Camped at spot for night. Side trip to Preston and ~~White~~ Water Canyon made to see locality for Lampropeltis pyromelana but not attained because of poor road conditions.

23 June 20 mi NNE Ely, White Pine Co., Nevada to Salt Lake City, Salt Lake Co., Utah. Broke camp at 1110 and drove NE to Wendover on Utah-Nevada line. Weather cool and partially cloudy and no collecting done except a few DOR's recorded - see R. Stebbins ~~catalogue~~ notes. Terrain typical, (rocky outcroppings in hills and non-rocky sagebrush flats) of Nevada. Enter barren salt flats and flooded saline areas immediately over Utah line which continue half way to S. L. City. E of saline flats is more sage desert with beautiful stratified out crops of rock. Considerable irrigation approaching town. Night spent in canyon just behind Capital building.

24 June Salt Lake City, Salt Lake Co., Utah. Morning spent talking with Keith Kelson, a very

W. Riemer
1949

Journal

24 June <u>Salt Lake City, Salt Lake Co., Utah</u>
well informed person, mammalogist of vertebrate zoology museum of U. of Utah, and Mr. & Mrs. Mulaik also of zoology dept. The latter not particularly well organized nor well informed couple. See R. Stebbins journal for information on collecting in Utah obtained. S. L. City appears attractive town situated in valley bound in part by Wasatch Mts. at present still with large patches of snow. Town green, lots of trees and lawns, clean, quiet. University appears well situated and pleasing in appearance. Strongly impressed with entire city. In late afternoon looked for <u>Pseudacris</u> without success in Welch's Fish Hatchery, 1.5 mi. E Murray, S of Salt Lake City. Did take several <u>R. pipiens</u> and <u>T. elegans</u> however. Also looked for <u>Pseudacris</u> in sedimentation basin and channels N of Salt Lake City on 8 West (St.). Camp again set up in canyon above Capitol.

25 June <u>Salt Lake City to Hobble Creek, E Springville, Utah Co., Utah</u> Broke camp 0915 and before leaving town collected small series of <u>Ambystoma tigrinum</u> larvae in reservoir near University of Utah stadium. Then drove

W. Riemer
1949

Journal

25 June Salt Lake City to Hobble Creek, E Springville, Utah Co., Utah - to Provo via U.S. #40 and #189, called by some the Alpine Loop. Most of roadway through high alpine valleys and meadow. Extremely green and lush appearing. Rapid streams and rivers frequent. Mts (Wasatch Range) steep, rocky. Little organic matter on or in soil. Perhaps this feature prevents salamander existence in these mountains. V. Tanner says Rockies with same type of soil (Wasatch Range considered part of Rockies, says Kelson). Stopped along road in several places to look for Pseudacris and B. woodhousii. At 13.6 mi. NNW Heber, Summit Co., got large number of various kinds of tadpoles (unidentified) and adult pipiens. 13 mi. NE Provo got pipiens and Thamnophis elegans. After reaching Provo, visited Vasco Tanner, an agreeable sort of fellow, who showed us some of collection of Brigham Young University. Also provided information on collecting sites in State (see R. Stebbins journal) and suggested Hobble Creek as one of best local spots for collecting. Camped for night along Creek.

W. Riemer
1949

Journal

26 June — Utah, Utah Co., 7.6 mi. (by rd.) E Springville, Hobble Cr.
Morning spent bringing notes up to date. Afternoon spent collecting in canyon bottom and on more gently sloping sides. Weather overcast and occasionally raining lightly. Sun had shone some during morning. 2 Sceloporus taken during early afternoon when rocks still warm. Nothing at all seen during remainder of afternoon. Weather(?) responsible for poor collecting; at no time was it necessary to wear more than T-shirt. All three of us walked down rd. at dusk but could find no specimens on rd. or under logs. Night hawks and bats of various kinds abundant at dusk.

27 June — Hobble Creek to 22.5 mi. ESE Deseret, Millard Co., Utah Broke camp 0845 and drove to Provo to pick up first mail of trip. Then at shore of Utah Lake just W of Provo collected Pseudacris nigrita and Rana pipiens. At noon were on way SW toward Delta in Millard Co., on U.S. Hwy 6. Noted Pituophis catenifer DOR for record only in Utah Co. just E Juab Co. line on U.S. Hwy #6. At 1500 hours stopped 13.4 mi. SSW Eureka in rolling desert situation and made collection of Utas and Cnemidophorus. Pituophis

W. Riemer
1949

Journal

27 June — Hobble Creek to 22.5 mi. ESE Deseret, Millard Co., Utah:
DOR, for record only, at same spot. DOR *Crotalus viridis* noted 8.4 mi. NE Millard Co. line in Juab Co., and a short distance further stopped again to hunt reptiles on very extensive area of sand dunes. Dunes were 26.0 mi. SSW Eureka in Juab Co. Was impressed with area (probably several square miles) which sand covered and also with "perfect" nature of sand and growth and insect life for large population of lizards and snakes of dune inhabiting type. Several hours search revealed nothing but *Sceloporus graciosus* and a few *Crotaphytus wislizenii*. Tracks of those species as well as those of rodents, beetles and caterpillars were common but could find not a single trace of a snake track. Could not have been obliterated either since rodent tracks of previous night still very fresh. At time it was thought dunes might be isolated pocket and not available for occupation by dune forms. But further travel down highway showed other extensive sand deposits present. Is this apparent paucity of snakes in

W. Riemer
1949

Journal

27 June Hobble Creek to 22.5 mi. ESE Deseret, Millard Co., Utah.

Utah the result of isolated pockets of snakes which we haven't discovered or is the population simply thinly dispersed? The general uniformity of terrain and vegetation would ~~seem~~ to rule against the former. Yet how do the members of these thin populations, if they are such, meet a member of the opposite sex in breeding season frequently enough to maintain the population. Is it a chance matter? Does the small chance of meeting keep population down? Why shouldn't breeding potential surpass mortality or vise-versa. Seems unlikely that rate of reproduction and mortality should so nicely balance in thin population where infraspecific competition so slight. After leaving dune area ran into what appeared like population pocket of Pituophis catenifer. Many DOR's on road in short distance. Recorded at following distances NE Delta, Millard Co.: 8.5 mi., 7.6 mi. (2 specimens), 7.2 mi. (R. Stebbins catalogue), 4.8 mi. (2 specimens), 4.1 mi., 2.8 mi. Coluber taeniatus DOR's taken at 1.3 mi. and 2.3 mi NE Delta. All for record only except one noted as in R. Stebbins catalogue. 3 mi. WSW Delta stopped to search stream and found only

W. Riemer
1949

Journal

27 June Hobble Creek to 22.5 mi. ESE Deseret, Millard Co., Utah

Rana pipiens. Impressed by Deseret in passing through. Single "Deseret Cash Store" and gas station. No other stores, shops, shows, etc. A very "proper" town. Passed through at 1920 and set up camp at above locality next to sand dunes just at dark.

28 June Millard Co., to 2.0 mi. SW Joseph, Sevier Co., Utah

Spent most of morning on notes and pickling animals. At 1300 rapidly broke camp because wind sprung up across sand dunes rapidly making a local dust storm. On road to Holden, State Hwy 26, recorded one DOR gopher snake. Then turned NE on U.S. 91 to Scipio and took State 63 to Salina. Just N and W of Scipio Lake appear several thick stands of conifers in mountains. Hiked into large canyon W of N end of lake in hopes of turning up a new salamander. No such luck! Good thick oak leaf litter, plenty of thoroughly rotten logs and many rocks yet Stebbins said none were sufficiently damp for best conditions. Many similar appearing spots (from distance) seen along road SW Salina. Stebbins thinks well worth

W. Riemer
1949

Journal

28 June Millard Co., to 2.0 mi. SW ~~Joseph~~ Joseph Sevier Co., Utah
looking further earlier in year when damper. Saw in canyon and captured 1 Thamnophis elegans, 1 Sceloporus undulatus (?). S. graciosus also present. Impressed, as have been over entire state, by number and variety of ants. Probably 3 out of 4 rocks or logs turned with ants beneath. Could this be reason why reptiles and amphibs which like to hid under such objects appear to be so rare. One of good conifer stands 5.0 mi. SSE Scipio in mountains to W, another, 9.2 SSE Scipio in mountains to W. Continued SW from Salina on U.S. 89 to locality where camp set up for night. After being in bed for most of an hour R. Stebbins thought he heard an amphib calling in distance. Followed call to pond and reservoir perhaps half mile away. Captured 3 adult ♂♂ of Bufo woodhousii, and 1 young R. pipiens. Watched last ♂ sing for several minutes before capture, responded beautifully to imitations made by R. Stebbins. They must hear air borne vibrations! A beautiful and impressive show.

W. Riemer
1949

Journal

28 June 2.0 mi. SW Joseph, Sevier Co., Utah. For details of B. woodhousii hunt see species account and R. Stebbins notes.

29 June Sevier Co. to Bryce Canyon Nat'l Park, Garfield Co., Utah Broke camp at 1300 after working over notes during morning. Checked B. woodhousii locality for tadpoles but found none. Many huge carp (?) present. Collected single S. undulatus SSW Junction 12.5 mi. and 1 S. graciosus and T. elegans 19.2 mi. SSW Junction. At former locality undulatus taken at tip of huge rock pinnacle while small rocks near ground inhabited by many graciosus. Is this the ecological segregation factor. Leaving U.S. 89 turned on State 12 to Bryce Canyon. Camped in main camp area near entrance. Took many color shots of canyon in evening and morning of 30 June. Yellow Pine, P. ponderosa, begin to appear at 7000 ft. in this area, at Red Canyon entrance to park.

30 June Bryce Canyon to Zion Nat'l Park, Washington Co., Utah Left Bryce at 1150 after writing notes during morning. In Sink Valley SE Alton 4 mi. spent much of afternoon

W. Riemer
1949

Journal

30 June Bryce Canyon to Zion Nat'l Park, Washington Co., Utah
looking for Gerrhonotus c. utahensis. Got first Phrynosoma douglassii but no luck on Gerrhonotus though thick oak groves with much leaf litter and moist substrate looked ideal. Picked up small T. elegans on trip back to main highway. N Glendale collected series of S. graciosus and undulatus. Both appear to be inhabiting same niche. (See graciosus account this date). Skinks also seen, 1830 hours, and eggs of species(?) taken but could not capture skinks and identity uncertain. Arrived at Zion about 1915 where camped for night.

1 July Zion Park to St. George, Washington Co., Utah
Broke camp 1015. SW Springdale collected for several hours, taking Bufo compactilis series, many Bufo punctatus (?) tadpoles and eggs, Scaphiopus hammondii larvae, Uta stansburiana, Crotaphytus collaris, Cnemidophorus (seen only), Sceloporus undulatus and magister. Continued in afternoon to Saint George where washed clothes and wrote notes on many of amphibs which had died in intense heat of day. Camped for night out of town.

W. Riemer
1949

Journal

2 July Bloomington, Washington Co., Utah
Morning spent working up notes and caring for animals. Extremely hot. Afternoon and evening spent looking for Rana onca and catching B. punctatus compactilis, woodhousii and Scaphiopus hammondii. Compactilis very common, and series of tadpoles taken.

3 July Bloomington, Washington Co., Utah
Most of day spent hunting toads. Road collecting at night yielded essentially nothing though all conditions appeared perfect. Collected large series of, and studied calls of B. punctatus. I succeeded in imitating S. hammondii call.

4 July Attempted today to get S. occidentalis or undulatus, both reported from Saint George. Did not succeed, though I succeeded in getting a Sauromalus near Bloomington. Became ill at noon and did little else for day.

5 July-6 July Bloomington to Lake Mead Natl Recreational Area, Clark Co., Nevada Still ill and participated in no field work. Drove SW from Saint George to Las Vegas where camp made first night. Most of next day spent looking for Rana fisheri localities about

W. Riemer
1949

Journal

5-6 July <u>Bloomington to Lake Mead Nat'l Recreational Area, Clark Co., Nevada</u> Las Vegas. Camped that evening at bathing beach just above dam.

7 July <u>Lake Mead Nat'l Recreation Area, Clark Co., Nevada</u> Day off. All of party went swimming, got badly sunburned. Weather extremely hot. All most uncomfortable.

8 July <u>Lake Mead to 36.3 S Needles, San Bernardino Co., Calif.</u> Just outside Kingman looked for <u>Urosaurus ornatus</u>. Found, but did not capture one <u>Sauromalus</u> under first rock flake pulled off. Further search ~~rock~~ revealed nothing. Farther along road to Needles collect small series of <u>Urosaurus graciosus</u> in creosote bushes. S of Needles in early evening took 2 <u>Chionactis occipitalis</u> but nothing more. Camped at locality.

9 July <u>San Bernardino Co., to Yuma, Yuma Co., Arizona</u> Continuing S on U.S. Hwy 95 picked up several <u>Dipsosaurus</u> along road just N Riverside Co. line. At Blythe turned E on U.S. Hwy 60+70. Just across River on Arizona side spent most of afternoon writing notes and preparing specimens. River wide here and though went in for bath noted lot of scummy blobs floating on surface. Is such water safe?

W. Riemer
1949

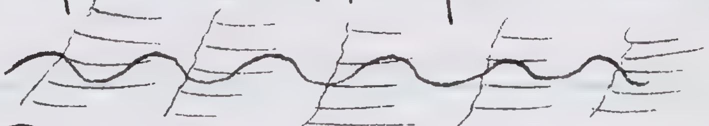
Journal

9 July San Bernardino Co. to Yuma, Yuma Co., Arizona

That stretch of U.S. Hwy 95 closely paralleling River said by R. Stebbins to be very productive for night work. Left Ehrenburg at 1715. Almost immediately Saguaro appear. Palo Verde, ocotillo, creosote, encelia (brittle bush), cholla and ironwood present. At Quartzite took State Hwy 95 S to Yuma. Both ends of road well paved and it appears from construction work in progress that it is to be paved road all the way through. Small sand dune area appears 15-20 mi. out-side Yuma. R. Stebbins says reminds him of Pinto Basin dunes. Briefly looked over dunes 23.1 mi. out of Yuma at sun-set but found nothing out. Tracks abundant. Arrived in Yuma 2020. In town 0.2 mi E Center St on 1st St. heard ~~toad~~ loud chorus of toads. Call very different than I had heard before — proved to be B. woodhousii. Notes as to temp. of environment, and bodies; notes on spacing and calls in R. Stebbins notes. Impressed by ~~hoarse~~ "hoarse cry of baby" sound. Bull frogs heard in distance. Stebbins pointed out chorus of night-hawks W of town near camp. Sounded very much like distant small pump motor, or tractor.

W. Riemer
1949

Journal

10 July <u>Vicinity Yuma, Yuma Co., Arizona</u> During morning looked for and took several *Uma notata* in sand dunes W of Winterhaven in Imperial Co. on Calif. side of river. Most were extremely wary running long distances to shelter of bush or tree before stopping. Tracks of *Chionactis*(?)  not uncommon. Followed one of two sidewinder tracks seen. Took rambling route to, and disappeared into a hole in ground. Afternoon spent writing notes and bathing in canal in town.

11 July Spent all of daylight hours shopping, getting truck fixed, and completing various chores. In evening rode out Calif. side of River on road to Laguna and Imperial Dam. Picked up *Lampropeltis getulus* ~~yumaensis~~ *yumensis* just before dark. Just after dark got small series *Rana pipiens* beyond Imperial Dam. Just below Dam got 1 *Coleonyx* on road. Saw nothing rest of evening though temperature and other conditions seemed ideal. Moon did not arise until late. Just before sunset had Bob take picture of me in my new mousache and haircut.

W. Riemer
1949

Journal

12 July <u>Vicinity Yuma, Yuma Co., Arizona</u>
Went out to dune area W of Winterhaven right after breakfast. Objective, to get pictures of area. I took one shot of *Uma notata* habitat including dune and Palo Verde tree. Spotted two *Uma* of which Ernie shot one. (See R. Stebbins catalogue). *Urosaurus* sp(?) (probably graciosus) present in one of Palo Verde trees. Could not capture. Further search produced none. Tracks of *Chionactis* (?) seen. Returning to junction U.S. Hwy #80 and rd. to Laguna Dam (on Calif. side) stopped to search railroad trestle and willows for *Urosaurus ornatus*. Trestle yielded nothing as did willows but 3 taken on trunks of mesquite screw-bean and/or straight (?) in willow association. Later while writing notes on grounds of Public Library in Yuma Ernie found about one *Uro saurus* per tree. That is hunting the easy way. Near trestle Ernie also brought in *B. woodhousii* and a DOR *Sonora semiannulata linearis*.

12 July <u>Yuma to 6.9 mi. WSW Gila Bend, Maricopa Co., Ariz.</u> Left Yuma going eastward on U.S. Hwy 80. Terrain low, sandy, with sparse vegetation in general,

W. Reimer
1949

Journal

12 July <u>Yuma to 6.9 mi. WSW Gila Bend, Maricopa Co., Ariz.</u> Set up camp for night at locality. During evening 2120 - 2230 I slowly covered road once between camp and Gila Bend. Total of 15.8 mi. 1 DOR and 1 LOR rodent seen, no herps. Moon rose about 2215. Night warm, windless, ideal. Are animals aestivating? Why aren't they abroad.

13 July <u>6.9 mi. WSW Gila Bend, Maricopa Co., Ariz.</u> Before breakfast took 2 <u>Cnemidophorus tesselatus</u> and one <u>Callisaurus draconoides</u> Weather clear and rapidly warming at time. Later in day, 1100, animals appear to have retired, at least not apparent. Photos taken of both habitats. E. and R. Stebbins took <u>U. graciosus</u> in mesquite trees about camp. <u>U. stansburiana</u> present as well as a <u>Sceloporus</u> at base of mesquite. I noosed young <u>Cnemidophorus</u> at shady base of mesquite at 1150 while writing notes. Bright blue tail was quite a surprise.

13 July <u>Gila Bend to Organ Pipe Nat'l Mon., Pima Co., Ariz.</u> Trip to Monument without incident. Left camp 1250. Between Gila Bend and Pima Co. line is uniform creosote desert

W. Riemer
1949

Journal

13 July Gila Bend to Organ Pipe Nat'l Mon., Pima Co., Ariz.

In rocky areas adjacent to low range of hills are stands of saguaro and cholla. S of Pima Co. line are mesquite along washes but predominantly creosote desert. Crossed Co. line at 1455. Reached Mon. headquarters, 17 mi. within Mon. just before sunset. Ate evening meal and returned to Ajo starting at 2050. Drove slowly entire way back seeing only Phyllorhynchus decurtatus and C. cerastes DOR's, one each. On road between Ajo and town well 8 mi. NNE town picked up 2 LOR Arizona, 1 DOR B. cognatus, 1 DOR P. platyrhinos. Just above town got series 4 B. alvarius by lantern light in small rivulet of water probably from mine. Water smelled strongly of H_2S and black slimy bottom. Toads mostly in dense Bermuda grass along edges of stream. After being in camp just outside Rowood and all ready to hit the "pad" Bob heard chorus of amphibs. Followed in car. Proved to be B. cognatus. Series of 7 taken as well as notes on calling and habitat. Taken in Rowood at base of mine sedimentation basin wall.

W. Riemer
1949

Journal

14 July Ajo to Tucson, Pima Co., Arizona

Actually B. cognatus taken early this morning. After sleeping and before breakfast shot one Cnemidophorus tesselatus and saw one Uta stansburiana near camp SE of Rowood. Spent most of morning completing notes. In afternoon started toward Tucson on State Hwy 86. Good road though dirt (under construction) to Sells. At Ajo most conspicuous plants — ironwood, palo verde, mesquite, creosote, saguaro, ocotilla, cholla. At Covered Wells about half way to Sells same plants present with addition of prickly pear with ripe fruits. Ocotilla well leaved plus other indications of ~~p~~ recent rain or considerable permanent water. All this area in Papago Indian Reservation. Stopped 36.0 mi. ~~E~~ WSW Escuela, Pima Co. to collect. Got Urosaurus ornatus, Cnemidophorus tesselatus and gularis Callisaurus draconoides and Holbrookia maculata. For plants present see last species this date. A little more than one mile closer to Escuela picked up half grown Gopherus ~~agaz~~ agassizii on pavement. Afternoon sun getting low, temperature warm though not

W. Riemer
1949

Journal

14 July Ajo to Tucson, Pima Co., Arizona
excessively hot, scattered clouds. Arrived at Tucson 1915 hours. Showered at Y.M.C.A. (50¢) and ate in town. Returned on road to Sells leaving Escuela at 2145. Road had been recommended for night collecting by John Hendrickson, former resident of Tucson, at present M.V.Z. graduate student. Night perfectly dark, traffic light, signs of recent rains evident and people in Tucson said had been raining lightly for several days. Probably weather too warm. Only one snake, DOR, Phyllorhynchus browni taken at 1000, in 11.1 mi. driving. Camp made at that point 11.1 mi. WSW Escuela.

15 July Tucson to Nogales, Santa Cruz Co., Arizona
Rained lightly several times at camp last night. Entire morning spent writing notes on yesterdays catch. In afternoon shopped in Tucson and drove straight through to Nogales. There picked up mail and visited at Gilbert Sykes at Forest Service Station 2 mi. NNW Nogales. Stayed for night at station. Excellent people the Sykes. During late afternoon collected P. solare, Holbrookia maculata, S. clarkii, U. ornatus, B. woodhousii on grounds of Station. Said to be very

W. Riemer
1949

Journal

15 July Tucson to Nogales, Santa Cruz Co., Arizona
hot day by Sykes. During evening Sykes
drove party over "line" into Sonora for
quick look around. Very reminiscent
of Mexico I saw in '42 with Bogert.
Shops full of curios and gift merchandise,
most of population of 20,000 on streets
talking and playing music. Great
contrast with modern Kresses and
"help yourself markets" on this side
of line. In late evening 10-1130 p.m.
hunted amphibs with help of Sykes
and son Godfrey, about 2 mi. NNW of their place.
on Simon's Ranch. Got series of Rana
pipiens in pond on Ranch. Has
rained recently in area Sykes says
(about 2 weeks, intermittently) but
could hear no amphibs calling. Sykes
family members claim toads calling
recently from drainage ditch across S.P.
tracks from Station.

16 July Peña Blanca Springs, Santa Cruz Co., Ariz.
Drove to Springs in morning and
collected about camp area between 1000-1200.
Took S. clarkii, H. maculata, C. gularis,
T. eques. Wrote notes in afternoon
until 1800. Light rain barely enough
to settle dust. Between 1800-1900

W. Riemer
1949

Journal

16 July **Arizona, Santa Cruz Co., Peña Blanca Spring**
after rains had stopped collected young *T. eques* and *S. clarkii* in vicinity of camp ground. After dark drove short distance up road toward Ruby ~~and~~ picked up several *B. alvarius* close to Springs. Nothing seen farther up road. Below Springs on road to Nogales about 1 mi. NE camp picked up *H. arenicolor*, *B. punctatus*, *M. carolinensis* ~~and~~ *D. regalis* ~~plus~~ larvae of amphibs in small ~~walls~~ rock-walled pools in stream channel paralleling roadway. Dark, no moon, cool. None of amphibs heard calling. On returning to camp saw three large *B. alvarius* in shallow end of stock trough by reservoir. Took two.

17 July **Arizona, Santa Cruz Co., Peña Blanca Spring**
Morning spent at collection locality of *Hyla*, *Microhyla*, *Bufo*, *Diadophis* to write notes and R. Stebbins took pictures of *Hyla* resting on rocks. Afternoon spent writing notes on yesterdays catch. Heavy rains occurred in afternoon and during evening went out to tank 2 mi. W of Peña Blanca Springs. Here collected *R. pipiens* and good series *Microhyla*. Heard first *Microhyla* call.

W. Riemer
1949

Journal

17 July Arizona, Santa Cruz Co., Peña Blanca Springs
On way to tank (a simple concrete dam across ~~stream bed~~ drainage area) took C. molossus on road. Considerable lightening close by and as soon as left tank cloudburst developed. Heavy rains during night.

18 July Arizona, Santa Cruz Co., Sycamore Canyon.
Spent hour before breakfast in P. B. Spgs. camp looking for Bipes. R. Stebbins and myself looked under rocks on hillsides and floor of canyon, under logs, leaf litter etc. None found nor any other reptile. Back in camp area I took Eumeces ~~callicephalus~~ callicephalus. Gloyd had taken one in Huachucas some years ago ((1933(?)) and Taylor had described animal in 1929 as new to U. S. Locality at present unknown to me where Taylor got specimen. Is this find a range extension? After breakfast drove to Sycamore Canyon with objective of collecting Rana tarahumarae. Small puddles and ponds present which look relatively permanent below Yanks Spring where car parked. Just below Spring area massive much fractured

W. Riemer
1949

Journal

18 July Arizona, Santa Cruz Co., Sycamore Canyon
rock ledges appeared good for Coleonyx, ~~Et~~ Robber frogs, rattlesnakes, etc. but considerable search revealed only one mashed S. clarkii. In ponds ½ mi. SW ~~Spring~~ found tarahumarae. Also in canyon took Thamnophis g. Cnemidophorus g., Sceloporus c. and Rana p. About 1300 hours returned to camp and spent entire afternoon and evening writing notes, except for short trip to H. arenicolor spot below camp to see it they had returned to proper niche in rocks as marked on previous day. They had not! Pool level 12 inches higher. Had rain been cause of disappearance of animals? None at all present. While there I saw one more E. callicephalus close to spot D. regalis taken previously.

19 July Peña Blanca Springs to Nogales, Santa Cruz Co., Ariz.
Broke camp in morning stopping only to check two spots. In seepage area close to camp ground found considerable numbers of Microhyla eggs (presumably not described for this race yet) in cattle hoof prints.

W. Riemer
1949

Journal

19 ~~18~~ July <u>Peña Blanca Springs to Nogales, Santa Cruz Co., Ariz.</u>
Also stopped to see if <u>Hyla</u> were in place below camp. One was present and in proper rock niche. Others were still missing. Does this mean that each animal has a certain spot to which it returns each day to rest? Such ~~#~~ is certainly suggested strongly! Proceeded to Nogales where shipping container for specimens procured and various personal matters cared for during morning and early afternoon. Afternoon and evening spent socially with Sykes' family again. Most hospitable!

20 July <u>Nogales to Santa Rita Experimental Range, Pima Co., Arizona</u> Packed specimens in morning. Most, poorly preserved and some thought to have hardened properly earlier now not hard. Could it be that intense heat of truck parked frequently in sun for several hours has cooked specimens soft? Such should be determined experimentally. Shipped specimens from Nogales and then drove in part through heavy downpour to Madera Canyon in Santa Rita Mts. Following directions of one of R. Stebbins

W. Riemer

Journal

20 July <u>Nogales to Santa Rita Experimental Range, Pima Co., Arizona</u> former students in herpetology located exact spot where he had seen <u>Bipes</u> under rock in rainy weather. We looked for 3 man hours immediately after heavy rain but found nothing. For map as to locality see R. Stebbins notes. In late afternoon drove to Florida Station, Santa Rita Exper. Range farther to N in Santa Rita Mts. Here put up for night in cabin furnished by ~~Max~~ Matt Culley, in charge.

21 July <u>Hdqtrs Santa Rita Experimental Range, Pima Co., Arizona.</u> Most of morning spent writing notes, though one hour (1100-1200) spent collecting in vicinity of Station. Single <u>Urosaurus</u> and several <u>Hyla arenicolor</u> taken. After noon drove by way of Box Canyon rd. across Santa Ritas to State Hwy 83 hence to State Hwy 82 and Hwy 92. In vicinity Fry picked up DOR <u>Pituophis catenifer</u> and <u>Thamnophis marcianus</u>. Latter stimulated examination of a near by pond. At pond took series of <u>marcianus</u> mostly young and

W. Riemer
1949

Journal

21 July <u>Arizona, Pima Co., Hdqtrs Santa Rita Experimental Range</u>
large numbers of *Scaphiopus hammondii* larvae plus larvae of *Bufo compactilis* (?) On inquiry about other water in and about Fry learned that another pond on grounds of Fort Huachuca. After inquirying at gate and request being announced to post commandant (?) (post under authority War Assets Administration) he insisted we visit him. Late in evening Ralph P. Merritt, in charge directed us to pool in hdqtrs area. Took huge *B. woodhousii* and several large *R. pipiens* plus notes of *pipiens* chorusing. Stayed at General Pershings "home" on post that night.

22 July <u>Arizona, Cochise Co., ~~Fort~~ Huachuca Mts, Carr Canyon</u> ~~In morning~~ drove up Carr Canyon some twelve miles below Fort area. Entrance made from State Hwy 92. Road steep and rocky but inspite of apparently heavy rains previous day or night easily passable to end. ~~Being~~ Beginning about 1300 hours started up trail from end of road toward Miller Peak. Turned rocks and logs over much of route but took

Journal

W. Riemer
1949

22 July Arizona, Cochise Co., Huachuca Mts, Carr Canyon
under such objects nothing except C. triseriatus which was seen under rock first. Another taken in open. Lampropeltis pyromelana found by Ernest crawling about in rocks. S. jarrovii taken at all elevations on trail as well as below on road up, on logs and rocks. Weather during entire hike heavily overcast and cool. On reaching head of Miller Canyon still 3 miles from peak returned to car since weather threatening and Peak completely enshrouded by clouds. Returned to Fort. After dark checked pool in Fry where gartersnakes taken yesterday but found nothing of interest except for collecting few more of metamorphosing toads. Returning to house on post about 2030 picked up S. hammondii adults (2) on road into Fort gate and 1 large B. woodhousei. Hospitality of Mr. Merritt has been very generous and pleasant, the information though limited, useful. Interest in our party chiefly because he was formerly Comptroller of U.C. Mr. Morrow of Fish and Game (?) on Fort knows Huachucas well.

W. Riemer
1949

Journal

23 July Arizona, Cochise Co., Fort Huachuca to 10.5 mi. NNE Douglas. Left the Fort after noon after devoting morning to note writing. Merritt suggested that anyone, anytime visiting in that area stop to see him at Fort. Drove over State Hwy 92 and U.S. 80 to Douglas by nightfall. Much storming and heavy rains ~~over~~ entire route. After dark drove NE-ward on U.S. 80 hoping to pick up specimens out because of rain. 2 mi. out of town stopped to pick up a S. hammondii on road and heard loud chorus of B. cognatus and a new unfamiliar trilling. In grass at edge of the roadside puddle found first B. insidior. Collected two. Took few notes ~~of~~ on insidior call but gave up because of loud ~~interference~~ interference from cognatus. See R. Stebbins notes. Then proceeded to 10.5 mi. NNE town where camped for evening. At that locality heard another loud chorus with new unfamiliar call. Search showed it to be Scaphiopus couchii making a nasal baaing ~~or~~ or crying sound. S. hammondii also present and calling. Why were not Scaphiopus present in the other pool and

W. Riemer
1949

Journal

23 July **Arizona, Cochise Co., Fort Huachuca to 10.5 mi. NNE Douglas**
why were only Scaphiopus present here? Actually they were present but in small numbers at best and not calling. Collected two ♂ couchii and one hammondii.

24 July **Arizona Cochise Co., 10.5 mi. NNE Douglas to ~~to~~ Graham Co., vicinity Calva** Left camp about 1100 hours and drove NE-ward toward Lordsburg, N.M. 32 mi. NE Douglas stopped to collect in one of few sunny spots available. Scattered heavy rains all about the one centered over the Chiricahuas caused us to cancel trip into those mts. At ~~is~~ collection locality got Cnemidophorus gularis, Sceloporus undulatus, Holbrookia maculata, Bufo compactilis and cognatus; Scaphiopus hammondii and couchii larvae. This was arid grassland habitat which had much standing water resulting from recent storms. Stopped just SE Duncan in Greenlee Co. to write notes. Before being driven out by rain Ernie got 2 H. texana the first of the trip. Beautiful lizards with a rainbow of colors. Just beyond Duncan noted young H. suspectum DOR on pavement. For details see R. Stebbins notes. 16.4 mi. NW Pima heard large mixed chorus in artificial pond next to

W. Riemer
1949

Journal

24 July — Arizona, Cochise Co., 10.5 mi. NNE Douglas to Graham Co., vicinity of Calva U.S. Hwy 70. Speculation before examination named as being present, B. insidior, cognatus, S. hammondii and couchii. Collection revealed all present except couchii which turned out to be woodhousii. This sounds much different to me than the woodhousii recorded in detail in Utah and very much the same as couchii heard last night. All species except insidior collected and R. Stebbins verified its identification in pond. Continuing on NW-ward that evening entered area where it had not apparently rained for several days at least and since pavement warm probably had been sunny during most of day. Between Geronimo and Calva picked up 1 each of Arizona, Rhinocheilus and C. atrox (record only) Atrox a DOR 17.8 mi. E Pinal-Graham Co. line ~~and~~ U. S. Hwy 70. Camped for night near Calva.

25 July — Arizona, Graham Co., vicinity Calva to Gila Co., Rose Creek Canyon Spent morning writing notes. Starting at 1400 hours head for Rose Creek area N of Roosevelt Lake. Stopped only for short period on State Hwy 88 to look for Xantusia arizonae. Some of rocks

W. Riemer
1949

Journal

25 July <u>Arizona, Graham Co., vicinity Calva to Gila Co., Rose Creek Canyon</u> appeared excellent but search short, weather overcast, and no specimens taken. Put up in Rose Creek Forest Service Public Campground for night. It is situated N of Roosevelt Lake on road to Young. In late afternoon collected nice series of <u>R. tarahumarae</u> larvae one of the objectives but failed to find any adults the other objective. During evening walk up road to check on any possible amphib choruses took series of young <u>B. compactilis</u> young and one adult. Heard no choruses. Why have we not yet heard <u>B. compactilis</u> sound off? This appears to be very pleasant spot to camp. No insects to speak of at night, considerable stands of mixed conifer and broad leaf trees, few people.

26 July <u>Arizona, Gila Co., Rose Creek to Maricopa Co., NW Phoenix</u> One hour during morning 1000-1100 spent looking for <u>R. tarahumarae</u> adults in tributary of Creek about half mile below lodge and camp-ground. Many tadpoles in various stages of growth present but no adults seen. Many spots appeared ideal. Stream small rocky broken into numerous pools between series

W. Riemer
1949

Journal

26 July ~~Rose Creek~~, Gila Co., Rose Creek to Maricopa Co., NW Phoenix
of rapids among boulders. Conifer and broadleaf trees shading ~~stream~~ stream. Much fractured rock above stream channel. A truely beautiful stream. Rose Cr. camp-ground is also pleasant spot with out excessive insect life. Urosaurus, Sceloporus undulatus, Cnemidophorus sp? also present. Coluber taeniatus taken in hollow log on ground after being frightened off log on which sunning. Left camp ground 1430 hours and proceeded to U.S. Hwy 70 near Globe, then westward to Apache Jct. 10.2 mi NE Apache Jct. looked for Xantusia arizonae in late afternoon but could find none. Took Scaphiopus sp? larvae, Urosaurus, Cnemidophorus tesselatus. Returning to Hwy 70 continued to Agua Fria River where camped for night.

27 July Arizona, Maricopa Co, NW Phoenix to Coconino Co. SSW Flagstaff. Wrote notes until 1000 hours, then drove to Coconino locality stopping only to collect at 6 and 1 mi. SW Yarnell in Yavapai Co., First spot in desert habitat with mesquite, creosote, prickly pear and massive rock piles. Objective Xantusia arizonae. None found but following species either taken or recorded: H. texana,

W. Rieman
1949

Journal

27 July <u>Arizona, Maricopa Co., NW Phoenix to Coconino Co. SSW Flagstaff</u> <u>Callisaurus</u>, <u>Coleonyx</u>, <u>C. tesselatus</u>, <u>U. ornatus</u>, <u>U. stansburiana</u>. Elevation suspected as being too low for <u>Xantusia</u>. At second locality <u>Xantusia</u> found. Oak, and various chaparral plants; Upper ~~Sonoran~~ Zone. Also taken or seen: <u>U. ornatus</u>, <u>H. texana</u>, <u>Callisaurus</u>. This at elevation of 4877 ft. the summit of the grade. Continued on to campsite without stop. Road (U.S. Alt. Hwy 89) traverses areas of gorgeous scenery, especially Oak Creek Canyon. Rivals in some respects Zion Nat'l Park. Stands of yellow pine extensive and thick. Camp made 8 mi. SSW Flagstaff in yellow pine area in roadside park. No insects at night and few until midmorning; a pleasant respite.

28 July <u>Arizona, Coconino Co., nr. Flagstaff to Navajo Co., nr. Lakeside.</u> Ernest captured in a fish pool in the campground where we spent the night four more <u>Ambystoma</u> to match the one I caught last evening. Thus far we have 2 adult terrestrial type and 3 large larval type. All taken in water. Does this mean that the terrestrial animals just transformed or are they individuals which have

W. Riemer
1949

Journal

28 July Arizona, Coconino Co., nr. Flagstaff to Navajo Co., nr. Lakeside

returned to the water because of recent heavy rains to breed? Also Ernest caught two young Thamnophis elegans. In camp I took one S. undulatus. About 1300 hours left camp. Entire morning spent writing notes. In Flagstaff spent most of afternoon buying supplies and caring for personal matters. Discovered that the Kitchen Kastle is a bad place to eat that Conrad's Machine Shop is a honest, inexpensive place to get small things repaired. Did a nice job on my camera film winder. In later afternoon drove to Holbrook and then Show Low by dark. Young kids in town told of spot 1½ mi. N Lakeside, a swimming hole, where small solid green frogs, "toad-frogs" were abundant. Investigation showed up none and could hear none call. One R. pipiens take at the pool. This is in conifer, yellow pine - oak belt. Vast areas of junipers, scattered over grassland between Holbrook and Show Low. Looks almost like park.

W. Riemer
1949

Journal

29 July Arizona, Navajo Co., nr. Lakeside to Apache Co., S Springerville.

Wrote notes until 1045 when we left camp. Collected about pools in vicinity Lake O' the Woods Lodge, 0.8 mi. NNW Lakeside. Collected and looked for Hyla wrightorum specifically until about 1230 hours. Found not sign of Hyla but discovered R. pipiens very abundant. Thamnophis present and larvae of B. woodhousii (?) and two adult Pseudacris taken. Situation appeared ideal for Hyla and Wright claims to have taken Hyla larvae at this spot. Returned toward Holbrook in early afternoon. Stopped 5 mi. S of town to check muddy pools in bottom of unusual sand stone(?) formation ravine. In red muddy water R. Stebbins got some Scaphiopus hammondii larvae and I shot C. gularis above on rocks. Habitat shot of area taken in color. Ernest Stebbins then dropped off in Holbrook for return trip home. In late afternoon Bob and I, the remaining party members, returned over same route to Pinetop, another Hyla locality. Found none in pond at NW edge of town but did take small B. woodhousii (?), T. elegans, and A. tigrinum larvae. Water temp of pool in 2 in. depth, 28.2° C.

W. Riemer
1949

Journal

29 July — Arizona, Navajo Co., nr. Lakeside to Apache Co., S Springerville

Here again the *Hyla* situation looked good. Continued on toward Springerville. About half way between Indian Pine and Springerville reached elevation of 9100 ft. where several scenery shots taken with last of sun. This country is high, flat essentially, and covered with grass. All hills ~~and~~ slopes covered with heavy timber. It is beautiful beyond description. Several miles further Bob got shot of sunset clouds at last possible minute. Ironically, amongst all natures beauties the cameras wouldn't function properly for the only really good sunset of the trip, a gallon of concentrated formaldehyde had just saturated the truck and was making driving next to impossible even with the doors and wind shield fully opened. Just at dark stopped to cook dinner and wash out truck when it started to rain during mid-operation. What a difficult life! Finally reached Springerville at ~~10~~ 2210 and headed for *Hyla w.* type locality 11 mi. S of town. Road quickly climbed to 9300 at 11 mi. Cold, air temp. 14.8°C and no Hyla heard so returned down mountain to more sheltered spot for night.

W. Riemer
1949

Journal

30 July <u>Arizona, Apache Co., S Spingerville to New Mexico, Socorro Co., Socorro.</u> Wrote up notes in morning. 1300 hours left camp and drove to Socorro without stop on U.S. Hwy 60. Arrived at Socorro 1655 hours. Objective: contact C. Lowe in hopes of replenishing formaldehyde supply and getting jeep to go into Sacromento Mts to search for <u>P. hardii</u>. Could not locate him and finally set up camp 11 miles S Socorro on creosote flat. Creosote stand almost pure, in bloom. No specimens seen on road in that 11 miles though dark, warm, and ideal in all obvious ways.

31 July <u>New Mexico, Socorro Co., Socorro to N Mimbres, Grant Co.</u>, Returned to Socorro and spent most of morning looking for C. Lowe. About noon discovered he must have left town just about the time we entered yesterday evening. Called my wife at noon on her birthday. Then on U.S. Hwy 85 drove S to Caballo and took State 180 into Mimbres Mts. Just over summit spent several hours in damp well-wooded canyon looking for salamanders. Conditions appeared ideal but could find nothing. Taking State 61 N again set up camp about 15 mi.

W. Riemer
1949

Journal

31 July New Mexico, Socorro Co., Socorro to Grant Co., N Mimbres
N Mimbres. Collected nothing during day.

1 Aug. New Mexico, Grant Co., N Mimbres to Silver City
Objective today, the XSX Ranch, E. Fork Gila River. Drove N on State 61 to G O S Ranch turnoff and 10 miles beyond that Ranch took Copper Creek road to right. This road is extremely difficult and rough. It is not desirable to descend last mile of road into canyon bottom. This is recognizable as portion of roadway consisting of bedrock exposed in shallow staircase arrangement. It is also about 14 mi. from beginning of road. This is only road serving this portion of canyon. Collected in canyon bottom from about 1300 - 1500 during which period 2 _T. angustirostris_, several _T. eques_ and _R. pipiens_ taken. These forms taken just above and just below American Iron and Machine Works property. (Reason for that name unknown to me). This is locality at which have records _R. tarahumarae_. Such could conceivably be in here yet the habitat is certainly not ideal. The canyon walls are largely in form of perpendicular pinnacles, the floor narrow and flat, the stream wide 50-75 ft. of steady, rapid flow and not broken up into pools

W. Riemer
1949

Journal

1 Aug. New Mexico, Grant Co., N Mimbres to Silver City

deep spots or shallows by rocks. In most places about 1 ft. deep. Advised not to go beyond 2nd ranch buildings because of quicksand in river. Road eventually leads to Fork of Gila and then to Gila Cliff Dwelling Nat'l Mon. Along river in several places hot springs occur. T. eques and R. pipiens occur in both stream and hot spring. Water over 40° C. Are the frogs in such pools especially adapted for such pools and do they choose such sites in preference to cool river? It is difficult to imagine occupation of one or the other habitat at random. Some interesting work on temp. tolerance and the possibility of two district Ranid populations being present is available. On leaving canyon saw wild flock of turkeys ~~in~~ at summit of ridge. Heavy rains had made road ~~bl~~ back to GOS Ranch slippery and our first task of digging the truck out of the ditch was begun. Near Mimbres again picked up two B. compactilis adults on road after dark. Just outside Santa Rita I spotted snake on road. Proved to be Ficimia cana. Stayed in auto court for night in Silver City.

W. Riemer
1949

Journal

2 Aug. New Mexico, Grant Co., Silver City to Dona Ana Co., W Las Cruces Morning occupied by writing notes at site of Ficimia capture. During afternoon short time spent looking to specimens in vicinity but nothing turned up. During late afternoon drove by way of U.S. Hwy 260 and 70-80 to point near Las Cruces Municipal Airport W of town. Nothing collected today.

3 Aug. New Mexico, Dona Ana Co., Las Cruces to Otero Co., Alamogordo About one hour of morning spent hunting in sandy mesquite hummock area of campsite. Cnemidophorus seen but none captured. In mesquite E of town shot several C. tesselatus. Extremely hot and midday period spent in shade of A. and M. College. A puddle had formed under conifer at edge of roadway because of leaking pipe. Some lizard on two occasions dashed through grass into water and remained hidden (submerged?) in spite of search. Could this be a Eumeces?; it was apparently the size of a large Cnemidophorus. Also during morning on entering town searched about river. One S. undulatus and one C. gularis taken. In late afternoon at Organ Bob took 2 new-born Holbrookia.

W. Riemer
1949

Journal

3 Aug. New Mexico, Dona Ana Co., Las Cruces to Otero Co., Alamogordo. texana. Weather cloudy and cool. Proceeded then to Alamogordo for night. During night rained intermittently but enough to thoroughly wet soil.

4 Aug. New Mexico, Otero Co., Cloudcroft Because of heavy overcast drove on State 83 to Cloudcroft near summit of Sacramento Mts, 8600 ft ±. Between 1000 - 1200 hours spend time about 1 mile below Cloudcroft look for Plethodon hardii. I found none though I looked under intact bark of fallen logs, fallen bark, rotten logs in and under, under rocks and in leaf-wood litter. Many of such situations appeared ideal. Bob took 3 in cleavage planes of bark and one in rock rubble of old mossy road cut. Raining steadily during these hours, often hard. In early afternoon above town looked in rock rubble of exposed hillside and I took two Bob none. Phrynosoma douglassii I took at first collection spot. Apparently had been driven out by rain. Returned in afternoon to White Sands Nat'l Monument camping in picnic area for night.

W. Riemer
1949

Journal

5 Aug. New Mexico, Otero Co., White Sands Nat'l Monument

Morning spent searching dunes for reptiles. Rain the previous day had well soaked the sand to a depth of 12 inches or more and left the sand this morning damp and firm. A footprint in level areas could scarcely be detected and walking up all but the steepest slopes was like walking up a hard-packed earth hill. For air, surface sand and below surface temperatures see R. Stebbins notes. Just about time temp. becoming hot Bob got first Holbrookia, other animals soon appeared on sun facing slopes of dunes and he got in rapid succession C. perplexus and Sceloporus undulatus. S. undulatus and H. maculata both seen in about equal numbers but perplexus more abundant. Also perplexus is only one seen on darker colored, exposed, underlying soil between dune formations. It was quite conspicuous on such soil. Problem of whether or not these forms gradually darken up at periphery of dunes presents itself. Furthermore, is this a result of environmental influence or genetic control? Entire afternoon spent writing up notes in Alamogordo.

W. Riemer
1949

Journal

6 Aug. New Mexico, Otero Co., Alamogordo to Roswell
Chaves Co.,

Roswell. During morning hunted both E and W of town in hopes of turning up *Phrynosoma* and *Cnemidophorus*. W of city in mesquite and *Atriplex* association took *C. perplexus* and *gularis* together in same habitat. Do they really occupy distinct niches here? Animals scarce in area and so moved E of town on to alluvial slope. Here soil not caked as on flat surfaces W of city and in creosote, prickly-pear association *C. tesselatus* common. That species, which seems to be much more wary than the So. Calif. race, and *Uta stansburiana* both taken. On several occasions *tesselatus* in flight went over and presumably vertical walls, once of a well or mine shaft, several times walls of deep stream cuts. Skin of large *Pituophis* (?) discovered at edge of such a cut. Notes written up at midday. In afternoon drove on U.S. Hwy 70 and 380 to Roswell where camped just W of town. On way stopped 5.9 mi. NE Mescalero, Otero Co., to look for *Plethodon hardii*. Elevation about 7500 ft± and mountains with thick cover of yellow pine and oak. Probably no damp enough however.

W. Riemer
1949

Journal

6 Aug. New Mexico, Otero Co, Alamogordo to Chaves Co, Roswell

Also stopped 15.4 mi. NE Green Tree in Lincoln Co., to look for Eumeces under large embankment of boulders. Found none but did Bob took small T. elegans vagrans.

7 Aug ~~Roswell~~ New Mexico, Chaves Co., Roswell to Eddy Co., Carlsbad

Morning spent writing notes. Purely by chance I kicked over an isolated ~~pice~~ piece of fiber board and caught a single Eumeces taylori under it. This extends the range about 80 miles N and from the nature of the terrain it may and probably does extend much further. All of this area is monotonously flat and alike. A C. perplexus seen in morning also. On returning in early afternoon to hunt for more taylori could find none thought several hours spent. Did take in similar habitat at same locality (2 mi. W Roswell) Holbrookia maculata and C. gularis and found skin of huge Coluber (flagellum?). ~~In~~ later afternoon, about 1500 drove to Carlsbad and camped there for the night. That evening heard strange sound which on investigation proved to be Acris gryllus singing from floating algae in river. One taken by Stebbins (see his notes). Also taken was one large Bufo

W. Riemer
1949

Journal

7 Aug. New Mexico, Chaves Co., Roswell to Eddy Co., Carlsbad

compactilis and seen was a Natrix (?) in the river. Found that by hitting or tapping two loosely held rocks together a good imitation of Acris could be made. Succeeding in getting the chorus to respond several times with such a method. First calls made singly and slowly tempo built up as in a train starting to roll. No notes as to timing and pitch taken.

8 Aug. New Mexico, Eddy Co., Carlsbad Caverns Nat'l Park

Morning spent doing laundry for first time since Yuma. In afternoon drove S to Park area and inspected the "hole in the ground." Caverns not seen since no more trips scheduled for that day. Returning to entrance near White's City spent about hour looking for Sceloporus poinsettii in rocky outcrops in canyon next S of entrance road. No Sceloporus seen but Urosaurus and Holbrookia texana taken. Discovered Coleonyx brevis under rock slabs and collected three. All young. Afternoon warm but heavily overcast. Returned to Carlsbad to Z camp for night.

W. Riemer
1949

Journal

9 Aug. New Mexico, Eddy Co., Carlsbad to Lea Co., Hobbs
Entire morning spent on animals and notes of past few days. In afternoon drove to Hobbs and camped for night near city dump E of town.

10 Aug New Mexico, Lea Co., Hobbs to De Baca Co., Ft. Sumner
While I repaired hand brake during morning Bob collected in surrounding area by dump a Terrapene, C. sexlineatus(?), Holbrookia maculata and saw S. undulatus. Ground cover of oak, yucca, Russian thistle, all about 12-14" high. The weather was clear and warm. Then drove N on State Hwy 18 to Clovis. On way N, at 12 mi. N Lovington noted DOR Rhinocheilus lecontei. Short grass prairie with scattered short mesquite on an essentially treeless plain. At Milne Sand noted nighthawks sitting on fence posts in hot sun. Took flight when approached to within 12-15 ft. At 24.2 mi. N Milne Sand took large DOR Arizona at edge of road. In good condition. In Clovis accidently discovered our first Phrynosoma cornutum in parkway strip by a vacant lot. in the middle of town. A nest of large maroon ants

W. Riemer
1949

Journal

10 Aug. New Mexico, Lea Co., Hobbs to DeBaca Co., Ft Sumner apparently was the attraction in the immediate vicinity. The "horns" of this animal seem to be sharper than those of blainvillii to the touch. Leaving Clovis in late afternoon with overcast weather began to notice Terrapene mostly DOR, quite commonly. These occurred from W. outskirts of Clovis to Melrose. One LOR taken. In very late afternoon picked up one each of S. hammondii (small) and B. insidior (small) in vicinity of Red Lake just E of La Lande. Returning to spot after dark picked up series of 17 hammondii on road and shoulder and one adult S. bombifrons in field (short-grass prairie) next to road. S. hammondii appeared much more abundant on road than in adjacent field. Had rained recently. This locality 1 mi. E of La Lande but in other notes listed as 9 mi. E Ft. Sumner. Camped for night at edge of river at Ft. Sumner.

11 Aug. New Mexico, De Baca Co., Ft. Sumner to Socorro Co., Socorro Morning spent on notes and animals taken yesterday. Before leaving

W. Riemer
1949

Journal

11 Aug. New Mexico, De Baca Co., Fort Sumner to Socorro Co., Socorro Bob collecting for about one hour took 4 C. grahamii, a new species for the trip and saw U. stansburiana. 22.3 mi. ESE Vaughan, in De Baca Co., noted Pituophis DOR. Short yucca in short-grass prairie. Passed through Mountainair at 1700 hours. Juniper-pinon-grass association very much like that between Holbrook and Showlow in Arizona. WSW Scholle in the Manzano Mts spent about 20-30 minutes rolling rocks but saw only S. undulatus about junipers. Raining lightly. 8.1 mi. E Bernardo noted DOR Terrapene and 6.4 mi. E same town picked up LOR Terrapene at 1830. Weather overcast. Short-grass, yucca, and along road Russian thistle. At Bernardo turned S to Socorro. Again C. Lowe not there so returned N of town to camp for night.

12 Aug. New Mexico, Socorro Co., Socorro to Bernalillo Co., Albuquerque Drove directly to Albuquerque and stayed for evening with Lt. and Mrs. Jack (and Esther) McKinnon, Jack a cousin of Bob's. ~~No collecting done this day.~~ Spent few minutes in dune area N of Socorro. Overcast. Saw C. (tesselatus?), took U. stansburiana

W. Rieman
1949

Journal

13 Aug. New Mexico, Bernalillo Co., Albuquerque to ~~so.~~ Sandoval Co., nr. San Ysidro Morning spent socially. In afternoon drove to site of University of New Mexico Archeological Station 6 mi. NNE Tijera on State Hwy 10. Here gave demonstration of collection techniques to Lt. McKinnon and family. In area collected a dozen S. undulatus and one large Coluber piceus which Bob shot. Returned to town. In evening drove to point SE San Ysidro on State Hwy 44 to camp for night. McKinnon's extended abundant hospitality.

14 Aug. New Mexico, Sandoval Co; to Santa Fe Co., Santa Fe Stopped along State Hwy 4 in morning at 7.5 and 8.1 mi. NNE Jemez Springs to look for salamanders. Conditions appeared ideal. Soil damp and both timber debris and rock rubble examined. Timber stand of Yellow pine, spruce, hemlock, aspen. 13 mi. W, 4 mi. S of Los Alamos hunted again in similar situations plus along stream and in stream. None found. 1 mi. further along road, State Hwy 4, spent short time looking again this time under bark because of large number of felled trees. When just

W. Riemer
1949

Journal

14 Aug. New Mexico, Sandoval Co., to Santa Fe Co., Santa Fe.

ready to give up Bob found an adult salamander. Further search by myself in immediate vicinity produced no more. Bob later tried slope — original locality on level ground — and soon found one more. In relatively short time had taken 18 all adults or near adults. All except first in or under rotten logs on moderate slope, in damp spots where water could be squeezed from wood between fingers. See R. Stebbins notes for details on first specimen locality. Almost every other log of a rotten nature produced a specimen. When too dark to hunt further drove on to Santa Fe where camp set up for night. Actual collection locality 1.2 mi. W intersection of State Hwy 4 and road to Cochiti Pueblo (23 mi.) and Bland (7 mi.)

W. Riemer
1949

Journal

15 Aug. <u>New Mexico, Santa Fe Co., Santa Fe</u>
Entire day spent on notes on <u>Plethodon</u> species discovered yesterday. Portion of afternoon spent in town shopping. Camped same spot as previous night.

16 Aug. <u>New Mexico, Santa Fe Co., Santa Fe to Colorado, Las Animas Co., nr. Sopris</u>
In morning drove to Cowles on U.S. Hwy ~~85-87~~ 84-85 and State Hwy 63. Place recommended to R. Stebbins by S. Leopold of M.V.Z. as spot possibly suitable for salamanders. Two hour search revealed none though many wet rotten logs examined. Soil much ~~dried~~ drier than soil in Jemez Range where Plethodons found but otherwise much the same. In early afternoon spent hour searching in Holy Ghost Recreation Area W of Terrero just S of Cowles. Here soil moist and conditions appeared more ideal than in Jemez Range. Found only one <u>T. elegans.</u> An excellent appearing spot to camp. Returning to U.S. Hwy 84-85 drove to vicinity Trinidad in Colorado to camp for evening. Hwy 85 used beyond Las Vegas, New Mexico.

W. Riemer
1949

Journal

17 Aug. Colorado, Las Animas Co., Sopris to Pueblo Co., Pueblo In morning just before breaking camp found single S. undulatus in trash dump where we had camped. On regaining dirt highway picked up a S. hammondii hopping on road in bright sunlight at 0900 hours. Picked up mail in Trinidad and performed some personal chores. Driving N-ward on U.S. Hwy 85-87 stopped 1.9 mi. SE Aguilar where one S. undulatus taken under a stone slab. Short-grass prairie with ~~pinyon~~ pinon-juniper covered hills 1/4 mi. W. Grass partially dried, short yucca, cholla, prickly pear, sunflowers along road. 8.1 mi. NNW Aguilar picked up DOR C. viridis still in good condition. Santa Clara Creek 300 yds away. Stopped again at 9.9 mi. NNW Aguilar to examine abandoned house ~~and~~ debris. Bob took P. douglassii and S. undulatus and I took one Sorex. Then drove on to Pueblo where camped for night.

18 Aug. Colorado, Pueblo Co., Pueblo to Denver Continuing N-ward on Hwy 85-87 stopped at 4.3 mi. SE Colorado Springs at Fountain Creek bridge where succeeded

W. Rieman
1949

Journal

18 Aug, Colorado, Pueblo Co., Pueblo to Denver

in taking one R. pipiens. Drove then on to Denver where we stopped to visit with Mr. Al Elliott and family, relatives of Bob. Met daughters Joyce and June (twins) and their respective daughters Carol and Karin. Also met Earl Elliott the son at whose house we slept that night. Arrived about 1600 hours and enjoyed good food and hospitality until bedtime.

19 Aug. Colorado, Denver to Morgan Co., Ft. Morgan

Continued visit until afternoon when we drove to Boulder to the University of Colorado and conferred with Dr. Rodeck - director of the museum, and Mr. Jones - Burdick - graduate student in herpetology and ass't. to Maslin. Jones - Burdick is joining New Mexico Univ. staff this fall. They provided us with several papers and information on where we might get specimens desired. See R. Stebbins notes for details of interview. Impressed with fact that Colorado herpetology yet imperfectly known and that this institution herpetologically is still in checklist stage.

W. Riemer
1949

Journal

19 Aug. Colorado, Denver to Morgan Co., Ft. Morgan. Leaving the University which has a beautiful campus and splendid setting against the mountains we drove E-ward on ~~State~~ 7 and U.S. 6 to Ft. Morgan. Along way picked up two T. ornata LOR and noted one DOR in vicinity Roggen in Weld Co. Also near here stopped to extinguish small grass fire started by passing train. It might have blown into serious proportions because of high gusty winds. Reached Ft. Morgan at dark and camped just N of town on the S. Platte River. Rained heavily during night.

20 Aug. Colorado, Morgan Co., Ft. Morgan to Larimer Co., Estes Park. In morning returned to point 5 mi. WSW Wiggins in Weld Co. to collect in sand hill region. Close to Empire Reservoir collected Heterodon nasicus, Pituophis catenifer, Holbrookia maculata, S. undulatus, Eumeces multivirgatus, T. ornata. Noted that large walking stick were abundant on plants as they were on pavement last evening between Roggen and Wiggins. In afternoon returning to U.S. Hwy 34 drove W-ward to Estes

W. Reimer
1949

Journal

20 Aug. <u>Colorado, Morgan Co., Ft. Morgan to Larimer Co., Estes Park</u> Park where we were met by Mr. & Mrs. Cullen, vague relatives of Bob's. We stayed at their small cabin in the hills above town for the night and enjoyed a good meal.

21 Aug. <u>Colorado, Larimer Co., Estes Park to ~~Rand~~ Jackson Co., Rand</u> Pulling away from Cullers in mid-afternoon drove through Rocky Mt. Nat'l Park. Dr. Lory - former president of Colorado State College of A. and M. - now retired, gave us information on the region and introduced us to a seemingly good botany work by Preston, R. J. - Rocky Mt. Trees - 1940. Dr. Lory is a friend of Cullers and lives next door. Preston's work put out by Iowa State College Press in 1940 and treats western North America with excellent distribution maps. Another volume he showed us was Foscue, E. J. - Estes Park, Resort in the Rockies - 1949. Said to be good on geology of region. Put out by University Press in Dallas. At or rather beyond crest of Trail Ridge Road (U.S. 34) spent about one hour in later afternoon looking for <u>Hydromantes</u> at foot of ~~large~~ small snow pack in cirque-like

W. Riemer
1949

Journal

21 Aug. Colorado, Larimer Co., Estes Park to Jackson Co., Rand. spot. None found nor any really suitable situation as recalled from Mt. Lyell habitat. Not enough rock on rock situations where water trickles over. Moss next to water 4.2°C. Water temp. 1.3°C. Continued to U.S. 40 and then over State Hwy 125 to Rand after dark. Camped at Rand.

22 Aug. Colorado, Jackson Co., Rand to nr. Rabbit Ears Peak. Spent morning on notes. At noon collected two Pseudacris and a young T. e. vagrans in marshy area in Rand. Did not look like R. sylvatica territory – our objective in the area – so drove to Grizzly Creek Campground in Routt Nat'l Forest, 10.9 mi. W Hebron in Jackson Co. and worked down stream ½ mi. to large beaver pond. Took R. pipiens, B. boreas, Pseudacris. Returning to Hebron stopped near school 7.1 mi. W town where short search again made for sylvatica. Saw R. pipiens, took B. boreas, P. nigrita. Then drove down State Hwy 14 to spot SE Rabbit Ears Peak where camp set up for night.

W. Riemer
1949

Journal

23 Aug. Colorado, Jackson Co., nr. Rabbit Ears Peak to Clear Creek Co., Georgetown During morning searched willow thickets and aspen groves on SE side of road. Here found R. sylvatica, B. boreas, P. nigrita, R. pipiens and larvae of all except Bufo. Rand and Grizzly Creek localities would probably have produced R. sylvatica had search been long enough now that niche is in part known. Though locality here given as 5 mi. ESE Rabbit Ears Peak it would have been better to use 1.9 mi. NNE Muddy Pass Summit. Spent afternoon on notes. Drove in evening and after dark to Georgetown via U.S. Hwy 40 E-ward and U.S. 6 W-ward. Camped at Georgetown for night.

24 Aug. Colorado, Clear Creek Co., Georgetown to Mesa Co., Grand Junction. During morning took pictures of several of our live animals and then headed straight W for Grand Junction. Stopped only near Frisco to check once more for R. sylvatica. Found none in very short search but did take a large B. boreas and saw several R. pipiens. Camped for night at Grand Junction.

W. Riemer
1949

Journal

25 Aug. Colorado, Mesa Co., Grand Junction to Montezuma Co., nr. Cortez In morning got mail and headed S. 14.6 mi. WNW of Delta stopped to collect in rocky area of desert-like situation. Took S. undulatus, Uta stansburiana, C. tesselatus, C. collaris. Some of collaris here extremely greenish. Drove on to Montrose where changed to U.S. Hwy 550 and continued S to Durango. In mountains near Silverton spent few moments checking logs for salamanders. None found and none expected. All of the Colorado Rockies appear to be too dry and rocky, i.e. little or no surface moisture in soil and very little leaf litter. Further there appears no heavily forested Transition but a change from spruce to sage-brush. From Durango drove after dark to point S of Cortez on U.S. Hwy 666 via U.S. Hwy 160. Camped for night.

26 Aug. ~~Colorado~~, ~~Mesa~~ Montezuma Co., nr. Cortez to Arizona, Mohave Co., nr. Peach Springs Worked on notes until 1100 hours. Then drove the following route to point where camped for night at ~~1~~2300 C.S.T. U.S. 666 to Gallup, U.S. 66 to Peach Springs. Stopped in

W. Reimer
1949

Journal

26 Aug. Colorado, Montezuma Co., nr. Cortez to Arizona, Mohave Co., nr. Peach Springs   Manuelito W of Gallup at Dean Kirk's Trading Post. This appeared to be only one not going in for sideshow attractions and prices not too high. Recommended as good place to get Indian articles.

W. Riemer
1949

Journal

17 Sept. Calif., Contra Costa Co., Pinehurst Objective on this trip merely to observe condition of stream and note development of larvae of Triturus. One hour survey of entire study area revealed: Growth of plants during summer near stream extensive whereas much of annual cover away from stream now dry. Stream level has dropped until in upper portion of area most of water confined to large dis connected pools. In lower portion only a few small muddy pools remain. Temp. of water 12.0°C; air 16.0°C. Only one larva seen. In lower area 103.2-2.3 one half-grown larva in murky pool 2 x 5 ft. X 8.5 cm. deep. Water striders and beetles of various sorts present. Larva wary and only brief glimpse obtained while animal resting in shallow water at edge of pool. Did not reappear even after long wait.

24 Sept. Objective today was to note what changes might have occurred in water level during past week and to measure a few larvae to determine degree of development. Entire course of stream from point 1-2.5 to a point about a quarter

W. Riemer
1949

Journal

24 Sept. Calif., Contra Costa Co., Pinehurst mile downstream from point 106.7 – 5.8 examined for water. Pools present in that area near weather station — 1.2 - 3.4, 2.3 - 6.1 to 2.9 - 5.7 rather continuously, and 3.4 - 6.3. No larvae seen in any of these and all much reduced from condition last week. The only other water present was outside of study area at spot where large drainage pipes empty into stream tributary near road fork. Pool here at present about 5 X 8 ft. by 1 ft. deep. Larvae of Triturus present in fair numbers and single Rana boylii seen. For measurements of larvae see species account. Temp. of air 15.2° C, water 12.9° C. Weather clear and warm. During past week weather unusually hot and dry. During examination of stream bed marked one juvenile Triturus outside of study area. Hours 0930 – 1130 spent in area.

24 Sept. Calif., Contra Costa Co., Lafayette Reservoir On guess that permanence of water here may have different effect on larva than transitory supply at Pinehurst

W. Reimer
1949

Journal

24 Sept. Calif., Contra Costa Co., Lafayette Reservoir
I spent entire afternoon in vicinity of dam. Here marked 61 newly metamorphosed Triturus and released them at same spot. Group of 53 collected for preservation. Weather warm and comfortable. Species also seen include Rana aurora, Hyla regilla. Both common.

1 Oct. Between 10-1200 hours marked 162 newly metamorphosed Triturus ~~larvae~~ young. A new group of Triturus present this week in same spot young marked last week. Weather clear and warm. Only trace of rain here during week past. Also noted in area Thamnophis elegans, R. aurora, H. regilla

1 Oct. Calif., Contra Costa Co., Pinehurst Only brief examination of stream level made. Did not rain at all during week. No water remains in upper area except at 1.2 - 3.5 and 2.2 - 6.1 to 2.6 - 5.6. No larvae seen at all. Pool still present where drains empty near road junction and larvae still abundant.

W. Riemer
1949

Journal

7 Oct. Calif., Contra Costa Co. Visited study areas at Pinehurst and Lafayette Reservoir. Improved former lower area by adding more surface cover in way of planks and branches of trees. Marked two *Rana boylii*. In latter area marked 284 young *Triturus torosus*.

15 Oct. Visited both study areas again. Added more surface litter to Pinehurst area as last week. Recaptured one subadult *Triturus*. Took photograph as seasonal record. In Lafayette area marked 270 animals under boards A & B only.

22 Oct. Visited Pinehurst and Lafayette study areas. In the former stream still dry and cursory examination revealed one *Triturus* which was marked. Also finished marking roadway for night work. At Lafayette marked 148 specimens of *Triturus*, all young, and 4 *Hyla regilla*. All of *Triturus* marked with 0011 toe pattern with following modified plan in mind. Each visit to the area during which marking is done on young animals a different formula will be used and

W. Riemer
1949

Journal

22 Oct. Calif., Contra Costa Co. all specimens marked the same. From the small area in which all animals have been marked thus far a radiating series of boards, as litter, will be arranged so that the wandering and dispersion habits of these animals may be ascertained. Board are to be placed in a series of arcs about this central point with each arc roughly 30 feet from its neighbors. Placement of such boards has been started. Each animal recaptured other than at the center of this radiating system will be assigned individual markings.

29 Oct. Only a short period spent in Pinehurst area. Pool beneath drain pipes only 3 ft. square now; 7.6°, water; 10.0° C, air. Temp. at 0900 hours. Considerable time spent painting coordinate numbers on boards about study area. At the Lafayette area handled 165 animals, all from under single board.

5 Nov. At Pinehurst noted that pool below drains only about 1 foot in diameter and a very few (6?) weak larvae

W. Riemer
1949

Journal

5 Nov. Calif.: Contra Costa Co. of Triturus still present. Will the last vestige of water disappear? At Lafayette Reservoir study area examined and/or marked all animals present. 227 Triturus handled. 208 of these newly marked. 3 Hyla (#5-7) newly marked. # 1, 3, 4, (Hyla) recaptured.

9 Nov. Heavy rains during the past two days prompted a survey of the road adjacent to the study area at Pinehurst at night. Light intermittent rain at time of survey, 2030 - 2230 hours. 22 DOR Triturus counted, 4 LOR Triturus marked. Two each of Aneides and Ensatina counted as LOR on road.

19 Nov. Spent most of morning in Pinehurst study area searching for Triturus. Stream is again flowing as result of recent rains.

26 Nov. Again morning spent at Pinehurst. More salamanders evident than last week.

27 Nov. Calif.: Santa Clara Co. Drove directly to Saratoga on State Hwys 17 and 9 from Berkeley. Spent several hours of early afternoon looking for Triturus along Campbell Creek just upstream from town. Much rotted wood about, especially on grounds of water company land. Moisture appears to be sufficient

W. Riemer
1949

Journal

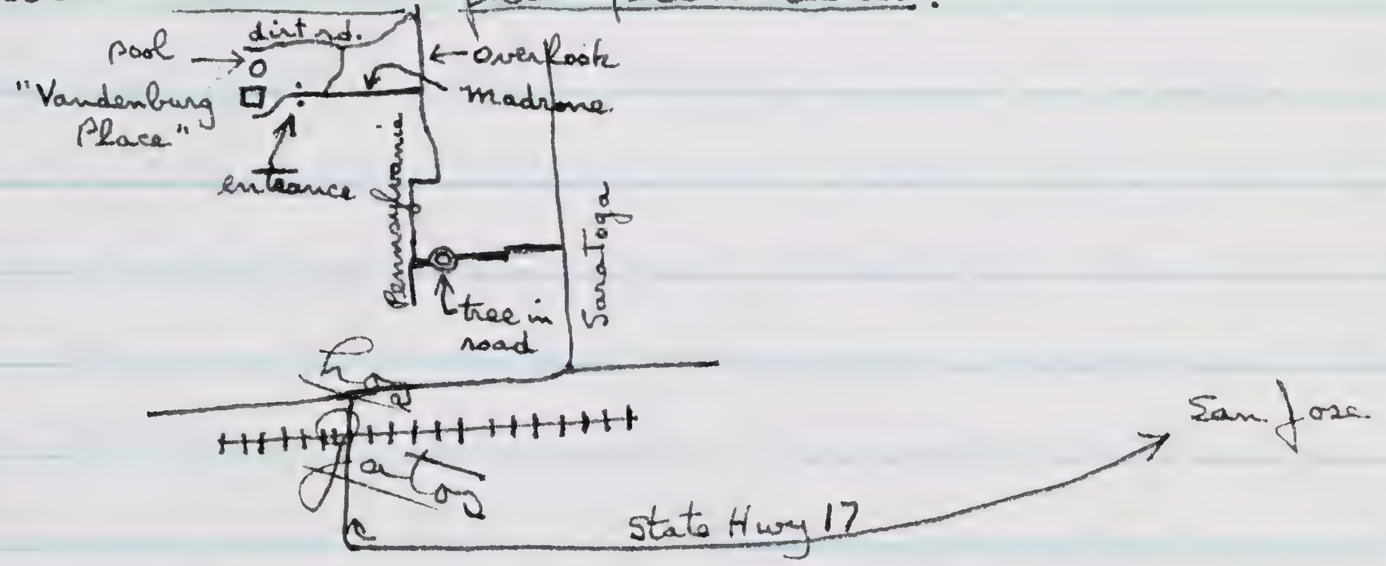
27 Nov. Calif.: Santa Clara Co. although soil under large pieces still dry. Single Triturus taken, three Aneides flavipunctatus several Batrachoseps. In late afternoon spent about one hour searching along Los Gatos Creek just above that town. A single Triturus taken. Again soil not sufficiently wet under larger pieces of cover. Is ~~more~~ rain necessary to bring animals out? Weather clear and sunny. Both localities principally oak woodland with sycamores and alders and willows along stream courses. A few Sequoia near Saratoga. All Batrachoseps given to Hendrickson.

3 Dec. Calif.: Contra Costa Co., Covered both study areas today. At Lafayette Reservoir 0900-1000. ~~Under Board A one animal found and marked in 0014 series. Toe pattern resulting as 0-0-1+2+3-4.~~ Has not rained during week. New grass well started. Several young Triturus taken well up on slopes. Laid out additional litter. No Triturus found at Pinehurst. 24 Batrachoseps, 4 Ensatina noted. Leaf blanket on ground thicker than last week.

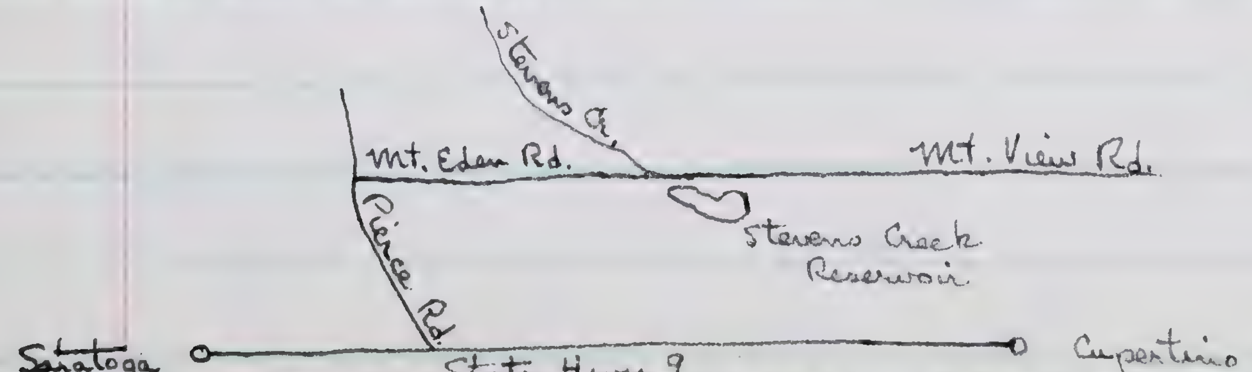
W. Riemer
1949

Journal

8 Dec. Calif.: Santa Clara Co. Arrived in Los Gatos 1100 hrs. Went to "Vandenburg Place" to check report of Gorman (M.V.Z. student) that T. granulosus were in breeding condition in pool on that property. Also because of heavy rains 7 Dec. hoped to get good series of granulosus from vicinity Saratoga—type locality of T. granulosus twittyii. Animals at "Vandenburg Place" proved to be T. torosus. Several adults amplexing. Also there took Aneides flavipunctatus.



Later, in afternoon collected at several points along Campbell Cr (State Hwy 9) above Saratoga. Very poor success. Took 2 Ensatina several Batrachoseps one Aneides flavipunctatus. In late afternoon drove to Stevens Creek. Here at dusk several



W. Riemer
1949

Journal

8 Dec. Calif.: Santa Clara Co. several T. torosus young and adult taken on road, as well as Bufo boreas young. This a very beautiful spot an may prove to be good collecting ground. Reservoir level extremely low. Might Triturus be breeding here? Only torosus found today. Where do granulosus live? Returned home via U.S. 101 and 101 Bypass starting at 1730.

10 Dec. Calif.: Contra Costa Co. Routine check of two study areas made today. 1145-1230 hrs at Lafayette Reservoir. No Triturus seen, although several (about 6-8) seen crushed on dirt road leading from hwy to top of dam. All dried, are animals probably killed during rain Wed. and Thur. (7-8 Dec). Single Batrachoseps seen under cover #3. Weather, sunny, clear, cool. Quiet water at shore 16.4°C. 1300-1400 hrs at Pinehurst. No Triturus. 12 Batrachoseps, 7 Ensatina. 1340 hrs; air 8.0°C, water 7.2°C. Leafs now all fallen; blanket still thick on ground. Several dead Triturus noted on roadway.

18 Dec. Calif.: Marin Co. Entire day spent at various spots in county. Objective: to collect and note sites for further collecting of Triturus

W. Riemer
1949

Journal

18 Dec Calif.: Marin Co. granulosus. Weather: alternately rainy and bright and clear or occasionally overcast. Has rained for several days in bay area heavily. Arriving in Marin at San Quentin Point by ferry, drove W to Green Brae. Triturus torosus DOR's common on roadway behind prison grounds. Then on to Ross, San Anselmo, San Geronimo. At San Geronimo turned N and then E on Lucas Valley Rd. just S of Nicasio. At Loma Alta School took Triturus torosus and Aneides lugubris. Short distance further near Marin Hospital and farm took T. granulosus, A. lugubris, Ensatina eschscholtzii, Batrachoseps attenuatus, Bufo boreas and Gerrhonotus multicarinatus. At U.S. Hwy 101 turned N to Novato and then W to Point Reyes Station. Along this road also took T. granulosus and Ensatina. Batrachoseps abundant. At Olema turned E and returned to ferry through Lagunitas and San Rafael. Noted likely looking stream for hunting Triturus in Taylor State Park. Back at road behind prison collected T. torosus on road where animals seen in morning.

24 Dec Calif.: Contra Costa Co. Visited study areas to check on Triturus populations. Weather: clear, sunny, bright, cool. At Lafayette

W. Riemer
1949
1950

Journal

24 Dec. Calif.: Contra Costa Co. Reservoir marked 3 new animals, 2 adult, 1 juvenile *Triturus*. Temp. under Board A at 8°C - no animals present; under cover # 3, 2 animals found, 11°C. Area checked in 3/4 hr. - 1030- 1115 hrs. At Pinehurst took single juvenile *Triturus*. *Batrachoseps* literally under every piece of cover, 4 *Ensatina* noted. 1245 hrs., water ~~t~~ 6°C, air 8°C. 1200 - 1330 hrs spent in area. Stream clear and flowing slowly.

31 Dec. Calif.: Contra Costa Co. At Lafayette Reservoir 0945-1130 hrs. On arrival low heavy fog over entire area. Soon dispelled by sun. At 1000 hrs. air temp. 6° C, water 9.4°C. A new radius of boards started. 6 new animals marked. 1 recapture. Several *Batrachoseps* noted. New grass now 4-5" high. Thistles just getting first true leaves in roadways and cleared areas. At Pinehurst 1215-1330 hrs. 1245 hrs. air temp. 6.6°C, water 5.2°C. Clear, sunny, cold. Stream clear, flowing slowly. 1 *Triturus* recapture # 85. Two *Ensatina* noted. Batrachoseps not abundant.

14 Jan. Calif.: Contra Costa Co. Visited both study areas. 1020-1050 at Lafayette Reservoir. At 1040 hrs. air 7.6°, water 9.2° C. Weather intermittently sunny. Clear. High thin clouds. Cold.

W. Riemer
1950

Journal

14 Jan. Calif.: Contra Costa Co. Very heavy rains during entire week. No Triturus. Two Batrachoseps on ridge at upper edge of area. In Pinehurst area 1200-1245. 1220 hrs. air 5.0°, water 5.6°C. Stebbins reports 4 inches rain in past week. Four Ensatina noted. Batrachoseps common but not abundant. DOR Triturus noted on roadway between Lafayette and Moraga

21 Jan. Two Triturus study areas visited. Pinehurst from 1215-1330 hrs. 134' hrs: air 13.0°, water 10.2°C. Storm during week brought water level higher than at any time since study begun. No significant change in stream bed within study area though such changes present at other places. Many of pieces of litter on stream banks removed by water. 19 Ensatina noted but Batrachoseps not correspondingly abundant. Single Triturus seen. Animal in water and represents first aquatic animal of season. Breeding condition in evidence. Such condition must be assumed before entering water. At Lafayette 1500-1545 hrs. 1545 hrs: air 15.4°, water 12.6°C. Water level very high in lake displacing Boards A-D. Three Triturus seen. Two adults, ♀♀, moving toward water on surface in late afternoon. Other animal

W. Riemer
1950

Journal

21 Jan. Calif.: Contra Costa Co. an apparently newly metamorphosed one, gill stubs still present. If so, metamorphosing takes place over considerable period of time. Noted a Hyla regilla and Rana aurora at about 150 ft. from water on grassy slope. Rana under piece of litter. Adult ♀ Triturus noted on roadway to dam top but probably 500 ft. from nearest lake, the nearest permanent water. To reach water must move up over dam.

28 Jan. Visited both Triturus study areas. At Lafayette from 1145 to 1300. Weather damp and overcast. Visit occurred during temporary lull in rain. 1230 hrs: air 7.2°C, water 8.8°C. Three new adults taken. By standing on bank noted that several Triturus already in water and occasionally coming up for air. Batrachoseps under one of boards on ridge. At Pinehurst area 1330-1415 hrs. 1345 hrs: air 7.0°C, water 8.0°C. No Triturus seen. Stream now muddy and impossible to know if any animals in water. What was fate of animal noted in water last week? Was he flushed downstream during heavy rains of week or did he leave water? 11 Ensatina noted. Batrachoseps common.

W. Reimer
1950

Journal

16 Feb. Calif.: Contra Costa Co., Lafayette Reservoir

Visited Triturus study area for first time since 28 Jan. 1430 - 1815 hrs spent in area. Willows budding, soil still very damp, grass 4-6 in. high. 1800 hrs. temp. of air 8.5° C, water of lake and pool mentioned below 11.5°C. # 19 - 25, adult ♀♀ taken under boards or in open. All but two active on surface. All ♂♂ apparently in water. ♀♀ especially in evidence at dusk when they appear to begin moving about. Many more seen than could be marked in time available. One ♀ recaptured, # 18. Map of area made and metal number tags put on cover items. In a pool about 25 ft. across and of undetermined depth, formed by the blocking of a ravine by a road fill, a large number of breeding Triturus noted. At least 10 amplexing pairs counted. Large numbers (30-40) nonamplexing individuals (♂ and ♀) also seen. Water murky and thin coffee color. Amplexing pair seen near the center over deep water and also near shore. Decided preference evident for shallow water amplexing. At least five pair in water 1-2 in. deep and one of those

W. Riemer
1950

Journal

16 Feb. <u>Calif.: Contra Costa Co., Lafayette Reservoir</u>
pair in water insufficient to cover back of ♂. Animals attempt in such situations to work way under tangle of grass at shore. Amplexing pairs much less wary than single animals and easily approached. When alarmed capable of high speed escape. Is this a coordinated effort or does ♂ do all the work? Vent of separated ♂ extremely enlarged and swollen and flaccid to extent that when animal inverted lips(?) of cloaca hung downward over tail almost to dorsal fin. A number of animals removed from this pool as a sample of <u>torosus</u> in this county during February. Breeding development and food contents to be noted.
No amplexing seen in lake proper but many animals seen coming to surface far out or swimming near shore. How far out do these animals go? to what depth of water. Found adult ♂ which apparently had become entangled with grass (?) on lake bottom and strangled to death. Body very much bleached. Also captured a subadult lacking almost all melanin. Specimen to be

W. Riemer
1950

Journal

16 Feb. Calif.: Contra Costa Co, Lafayette Reservoir kept as captive. One Rana aurora taken for experimental uses. Hyla seen almost everywhere though not common and occasionally calling from hillside. At dusk, in descending face of dam picked up a number of young Triturus, some young of the year and a Contia.

18 Feb. Calif.: Contra Costa Co., Pinehurst Spent 1430–1730 in study area. 1645 hrs: air 11.4°C, water 8.4°C. Weather clear and sunny. Batrachoseps under every piece of cover. 10 Ensatina seen, many small. Water now clear with good flow. Worked downstream perhaps a quarter mile to determine if Triturus population below study area (out of redwoods) any more dense than in area, and also to see if any marked animals had moved or been washed downstream. Triturus noted only in two spots in stream, such spots near open grassy slope and oak woodland. In rest of area only tangled thick mass of shrub-like vegetation present near stream. No Triturus in these areas. Will they remain absent even later in season?

W. Riemer
1950

Journal

18 Feb. Calif.: Contra Costa Co., Pinehurst   Is the presence of open grassy or at least open ground a factor in distribution of *Triturus*? During this side trip noted a few amplexing pairs of *Triturus*, all in shallow water, one pair almost entirely out of water. Unpaired ♂♂ also present. Noted perhaps 8-10 animals. Recaptured #69b, a *R. boylii* originally marked in pool beneath drain pipes above area. How did it get so far downstream? Or did it only move upstream to pool beneath drain pipes because it was only remaining pool of water in fall months? In area itself captured 3 new *Triturus* ♀♀, all at one spot and 3 ♂♂, all at one spot. One of ♂♂ a recapture from January. This animal, #88, in same spot originally marked in spite of several severe floodings and flushings of stream since first marked. Do animals leave water when such flushings occur or do quiet pools always exist for retreating into? Two juveniles also taken. None of ♂♂ completely pigmented for breeding yet within area of study. Obviously season here is later than at Lafayette.

W. Riemer
1950

Journal

19 Feb. Calif.: Contra Costa Co. Entire day spent in county at several localities looking for Triturus east of Lafayette. Walnut Creek examined at several points between town of Walnut Creek and State Hwy 24 near Concord. Stream flanked by orchards and open grass-land with scattered oak. Terrain looks suitable for Triturus. Stream however shows signs of very severe flushing and few quiet suitable pools present even now with level relatively low. During flushings certainly no quiet water present. Best place to look probably near Walnut Creek [railroad] Trestle #2 about 0.5 mi. NNE Walnut Creek (town). Here stream 3-4 ft. deep and about 25 ft. wide. No Triturus found; reasons obscure. Search also made in Contra Costa Canal where it crosses Ygnacio Ave SSE of Concord. Canal with sloping concrete sides, no noticable flow and layer of algae on sides. Surrounding terrain in orchards, terrain flat. No Triturus.
Another try 1-2 mi. SE Clayton in small tributary of Mt. Diablo Cr. Grassy hills with scattered oak. Water clear, 11.4° C but probably highly seasonal. Seemingly an ideal spot but no Triturus.

W. Riemer
1950

Journal

19 Feb. Calif.: Contra Costa Co. Somewhere about NE of Mt. Diablo Peak stopped to examine two large cattle tanks just N of Marsh Creek Rd. Open grassy hills, looks ideal for Triturus, for Ambystoma also, but none seen.

Excellent appearing stretch of stream immediately below Marsh Creek Park on Marsh Cr. Rd. examined. Here, stream flanked by heavy woodland on one side and light oak woodland with grass and some dry chaparral on other side. One R. aurora taken, but not kept, in rotten log.

At spot almost due S of Antioch again examined Marsh Cr. Appeared excellent. No Triturus. Local rancher and also several local boys state "water-dogs" or "-lizard" present in stream 2-3 weeks later in season - about early March. Recognized specimen when shown one. Stream 1-2 ft. deep and 20-30 ft. wide. Dry in summer so animals must breed in some more permanent water. Rancher says large numbers removed from Sycamore Springs "back up in hills" last (?) year. One Rana boylii taken in stream.

Do Triturus have a different activity period if present here?

W. Riemer
1950

Journal

25-28 Feb. Enroute to Texas: El Paso Co., El Paso

Party consisting of F. Pitelka, C. Kofod and myself left Berkeley about 0830 hrs. Objective: Southern Mexico for general collecting with emphasis on birds. Stopped first night at home of S. Peyton, Fillmore, in Ventura Co., Calif. Again driving all day, stopped second night in Gila Bend, Ariz. Heavy rainstorm during evening between Yuma and Gila Bend. Light rain and overcast over So. Calif. Third day continued to Tucson - had short visit with Dr. J. Marshall - and continued to Las Cruces, Dona Ana Co., N.M. for evening's stop. Arrived in El Paso on morning of fourth day.

2 Mar. New Mexico, Otero Co., Cloudcroft 8500 ft ±

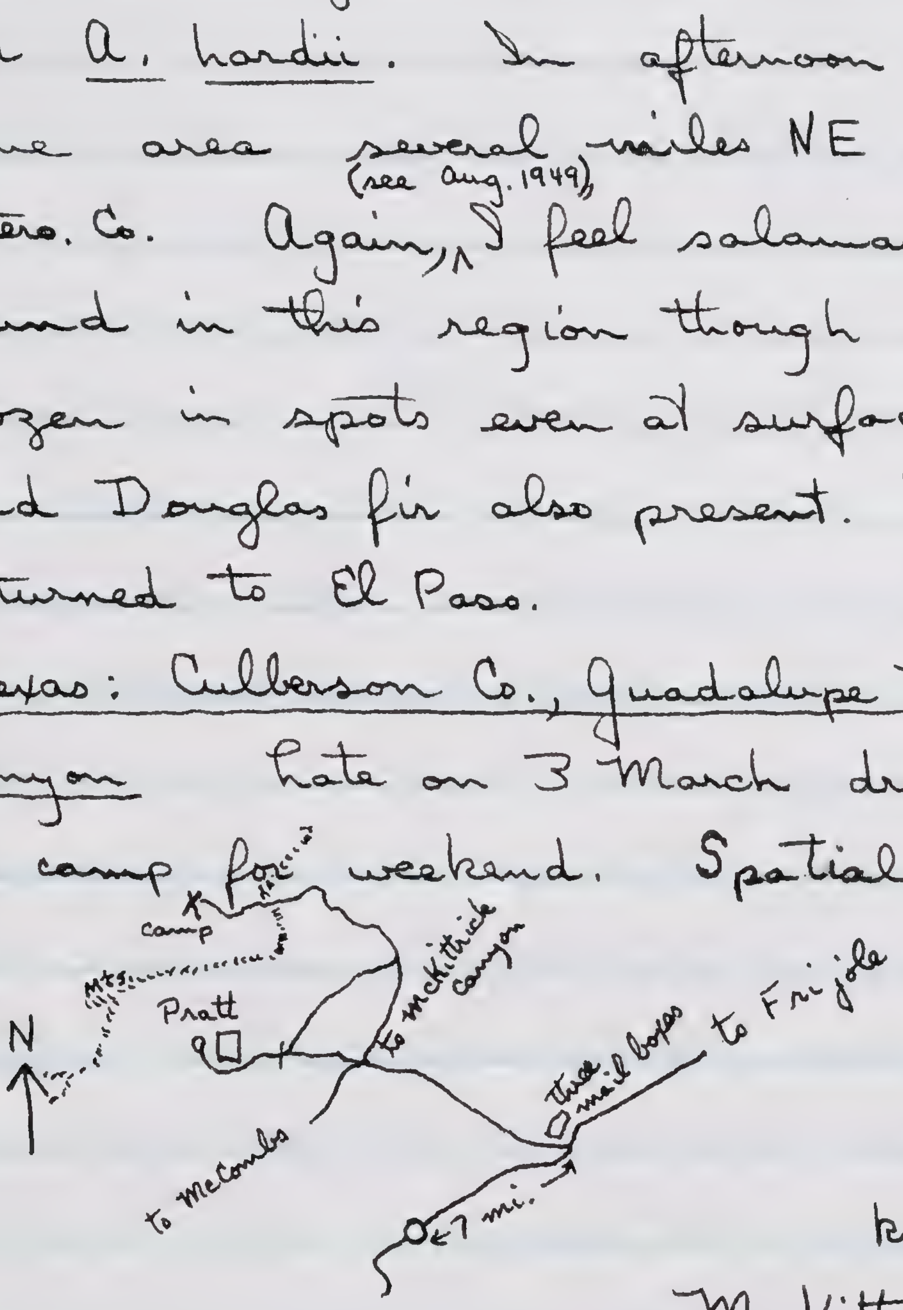
Late on the first of March drove to Sacramento Mts and camped for night short ways above tunnel on Cloudcroft road. This side trip a product of red tape delays at border. In early morning of 2nd of March light snow (1 in. approx.) fell over mountains even below pinion-juniper level. About 10-1100 hrs, two (a pair) of Juncos taken at Cloudcroft. About 1 in. of snow on ground, foggy, more snow falling just after birds taken. Douglas fir and yellow pine at Cloudcroft. Area so much different than when I last saw it in August of 1949. Then, wet, lush, green. Wildflowers in

W. Riemer
1950

Journal

2 Mar. New Mexico: Otero Co., Cloudcroft
bloom and green grass everywhere. Now, except for recent dampening by snow, everything dry, dusty-looking and many plants leafless. Noticed no grass. Did not attempt to look for A. hardii. In afternoon drove to yellow pine area several (see Aug. 1949) miles NE of Mescalero in Otero Co. Again, I feel salamanders might be found in this region though at present ground frozen in spots even at surface. White pine and Douglas fir also present. In evening returned to El Paso.

4 Mar. Texas: Culberson Co., Guadalupe Mts, McKittrick Canyon Late on 3 March drove to this locality to camp for weekend. Spatial relations of



features shown on map not known to be accurate.

McKittrick Canyon is, at least in part, owned by Mr. Wallace E. Pratt who maintains it as a wildlife refuge. With special permission got key to special ungrazed portion of canyon. Made camp here about one half mile above locked gate. Very late when camp established on night of 3 March. In early morning of 4 March took four birds: 2 juncos, 1 wren, 1 goldfinch within 0.5 mile down canyon

W. Riemer
1950

Journal

4 Mar. Texas: Culberson Co., Guadalupe Mts, McKittrick Canyon from camp. Most of day spent in putting up these skins. In late afternoon examined portion of stream about 300 ft. above camp where Koford claimed to have heard frogs calling. Frogs were induced to call at this spot while last rays of sun still warming area. None of frogs seen at this time though they responded well to call like drumming of woodpecker. At least 4 or 5 animals present. In evening just after darkness inspected site with flash lamp and spotted two frogs in water but deep within hollow in tangle of roots. Only marks noticed were gray mottle on periphery of chin and strong cross bars on thighs. This strongly suggests R. pipiens as did call notes. Only a few weak calls induced in evening. Is this because of coldness? Do frogs act seclusive because this is not yet breeding season? Was this a pair seen tonight? Near flowing portion of stream are several pools with anuran larvae. Some of these should be collected. In late afternoon took 3 Urosaurus enjoying last rays of sun on vertical, fissured limestone wall of canyon.

5 Mar. During morning went up canyon several miles. Beyond end of road, about 2 miles above camp, canyon narrows considerably and consists of

W. Riemer
1950

Journal

5 Mar. Texas: Culberson Co., Guadalupe Mts, McKittrick Canyon
series of vertical cliffs on either side rising 500 ft. or more. Canyon bottom here is about 75-100 ft. across and largely a jumble of rocks. The stream forms numerous deep, (6 ft.?), pools with large rainbow trout. Yellow pine and a madrone-like tree sparsely present. Canyon wrens calling frequently. Canyon still too well shaded and cool in mid-morning for reptiles. In lower, wider portion of canyon, bottom about 1/4 mi. wide, stream forms no deep pools and rocks not large. Sides not entirely vertical though many such sheer limestone faces evident. Few yellow pine, juniper common, rather extensive stands of dead and/or dormant maple and oak. Most such stands low and scrubby, 15-20 ft. Others of tall trees. Bunch grass everywhere since no grazing permitted in this canyon. Large madrone occur in small numbers. Also present are a yucca, cholla, prickly pear, agave and many unknown forms. On slopes above canyon in protected areas, thin stands of yellow pine reach to ridges. On returning to camp about noon noted robins, woodpeckers, canyon wren, and took a goldfinch. Search in midafternoon revealed no frogs. They had been calling in morning.

W. Riemer
1950

Journal

5 Mar. Texas: Culberson Co., Guadalupe Mts, McKittrick Canyon

Two *Sceloporus undulatus* taken in late afternoon, one in camp the other on limestone cliff adjacent to camp. One *Sceloporus poinsettii* (?) taken in late afternoon by peeling off loose flakes of rock from a south-facing cliff near camp. The particular flake was close to the ground. Much more rock peeled off with no results, probably because south-facing rocks get too hot from sun in summer. Most rocks dry underneath but some with dampish soil substrate.

One lizard, probably a skink, seen in vicinity of rocks in shaded area of small oaks. Dense mat of dead leaves on ground. Other animals noted: tracks of deer and elk, scats of fox (?)

6 Mar. Yesterday evening a strong wind came up blowing down canyon. This morning wind of gale proportions and so camp broken without further collecting. Mr. Pratt, when we returned the key to his wildlife refuge area, informed us that in 1924 the elk were introduced into the canyon, a total of 50 animals. He estimates currently 15 remain the others having gradually starved. He also estimates 35 deer present, says mountain sheep present on ridges. As seen from distance there must be fairly large stands of yellow pine on higher levels of ridges. Returned to El Paso in morning.

W. Riemer
1950

Journal

9 Mar. Texas: El Paso Co., 10 mi E, 3½ mi. S Mt. Franklin
Since 6 March been occupied with details of getting through customs at border. For few minutes this morning and about 1½ hours in late afternoon (just before sunset) spent looking for lizards east of El Paso in gravelly, creosote area near oil storage depots. 13 *Uta stansburiana* and 1 *Holbrookia texana* taken. No other lizards seen though in warmer weather a *Cnemidophorus* must certainly be present. Did not succeed in taking several sparrow-like birds present.

11 Mar. Texas: Hudspeth Co., 8 mi. E, 2 mi. S Sierra Blanca, Devil Ridge Left El Paso in late afternoon of 10 Mar after Pitelka left by air for Mexico City. Drove to this locality to camp for night. Half-hour examination period by flashlight and gas lantern revealed a few rabbits and one *Peromyscus*-like rodent. This area a creosote-yucca desert with gravelly to rocky soil and consisting of a long narrow (2-3 mi. wide) valley flanked by hills of a similar nature except more rocky. Camped at foot of S-facing slope. Other plants present: cholla, prickly-pear, agave and a very spiny mesquite-like shrub. Soil dry, obviously no rain for some time. Dry even under large fallen yuccas. Before dawn heard a horned owl calling. At dawn took

W. Riemer
1950

Journal

11 Mar. Texas: Hudspeth Co., 8 mi. E, 2 mi. S Sierra Blanca, Devil Ridge one of a pair of shrikes calling from top of yucca. Various birds common during first hour and one half after sun up but little activity thereafter. Took one "black-chinned" [desert] (?) sparrow. Noted presence of flickers, sparrow hawks, many of black- [desert] chinned sparrows, a thrasher (?) and several thrushes (?) of one or more kinds. All birds extremely wary; is this because of open country occupied? Sparrows appear to be ground birds seldom taking flight but preferring to hop behind nearest bush. At least when being observed would not often venture into open spaces between bushes to feed but very quickly hopped to shelter of nearest bush. At midday a search for reptiles made but without success. A considerable wind had come up and a general clouding up occurred. Only a few birds were flushed. At mid afternoon broke camp and drove toward Indian Hot Springs but took turnoff paralleling Rio Grande southward for 20 miles beyond turnoff. Character of country much the same except that near river soil became silty, salmon in color and because of wind very dusty. In late afternoon returned most of distance back toward Indian Hot Springs turnoff to camp for night

W. Riemer
1950

Journal

12 Mar. Texas: Hudspeth Co. vicinity Eagle Mts.

Spent most of morning looking for birds in area 10 mi. SW Eagle Peak. This is place where camped last night. At dusk last night shot Holbrookia which ran from under car in camp. Probably car disturbed it while buried. Area a wash but well covered by creosote and a variety of dormant highly thorny shrubs, mostly small but some few almost tree-sized. Soil mostly clean washed i.e. no grass or other low cover. Birds not common. Took one green-tailed towhee. "Black-chinned" desert sparrows commonest by far. Also present was pyrrhuloxia. Overcast all morning with wind during latter part. About noon moved to spot in narrow wash with large trees and dense lower brush 10 mi. W Eagle Peak. Here saw several pyrrhuloxia, Harris' hawk, desert sparrows, mourning doves, a ruby-crowned kinglet, and took a sage thrasher. After about an hour drove to spot at western base of Eagle Mts, 20 mi SE Sierra Blanca. Near here took a small Phrynosoma in roadway in mid-afternoon.

13 Mar. Night windy, cold and clear. In morning hunted about fans at base of Eagle Mts. Fans covered by yucca and ocotilla, various cacti and scattered thorny shrubs, none of which large.

W. Riemer
1950

Journal

13 Mar. Texas: Hudspeth Co., vicinity Eagle Mts.

Noted only few small groups of creosote bush. Vegetation very open and soil rocky. Grass present in some spots, but dry. Noted the following birds. Curve-billed thrasher, Brewer's sparrow, shrike, a hawk (Harris's?), mourning dove, a wren, woodpeckers, house finches, and "black-chinned" desert sparrows, the last very common. The first three species taken. Also present and taken by Koford were sparrow hawk, rock wrens and a screech owl heard in evening. Reptiles were surprisingly scarce considering fairly warm morning. Seen and taken were one Sceloporus undulatus and a Cnemidophorus. Also saw what I took to be young Holbrookia(?) Afternoon spent in putting up skins. In evening returned to camp in wash 10 mi. W Eagle Peak. Poor-wills on road after dark on fans but none seen lower down near wash. Noted that finches and woodpeckers and thrashers and wrens occurred in pairs. Desert sparrows in flocks.

14 Mar. Texas: Hudspeth Co., 10 mi. W Eagle Peak

Night cold and sun slow to emerge from behind dawn clouds. Birds also slow to awaken probably as consequence of lack of full sun. Within two hours after dawn noted sage thrashers, mockingbirds, robins, a hawk and

W. Riemer
1950

Journal

14 Mar. Texas: Hudspeth Co., 10 mi. W Eagle Peak

various sparrow-like birds. Koford took a white-breasted nuthatch. No pyrrhuloxia, our goal, were seen. For brief description of area see 12 Mar. Journal. To be added is fact that wash flanked on both sides by extensive areas of creosote bush. By midmorning we were returning to El Paso to pick up Pitelka who would be returning from business in Mexico City.

19 Mar. Mexico: Durango: On evening of 16 Mar. we passed finally through customs and proceeded toward Chiapas with dispatch. On that night we camped, to sleep only, in an extensive grass land area perhaps 100 mi. N of Chihuahua City. Prior to that point most of the terrain was truely desert as in adajcent Texas. On 17 Mar., after driving all day, camped in arid mountains about 120 mi. N of Hidalgo de Parral. Reached Durango in early afternoon of 18 Mar. and during afternoon took side trip toward Mazatlan to point 3 mi SW El Salto, Durango. Objective: to sample bird population, especially jays, in conifer zone of Sierra Madre Occidental. Camp setup in conifers, 8400 ft.± near large stream. Area in use as stock range and grassy areas (dry) well trampled. At night heard a horned owl but took nothing

W. Rainer
1950

Journal

19 Mar. Mexico: Durango: except one small Rana pipiens at edge of stream. During morning of 19 Mar. (very cold; -8°C at about 0730, shortly after sunup) I took a robin, stellar jay, ruby-crowned kinglet, white-breasted nuthatch, pygmy nuthatch, brown creeper and mexican junco. Seen, were western bluebirds (attempting copulation), ravens, turkey vulture, woodpeckers. See lists of Koford and Pitelka for other birds taken and seen. A great variety of species present and all surprizingly tame. Most of rest of day spent in preparing specimens. At time of departure saw 4-5 in. Ambystoma larva in stream but unable to collect. Specimen strongly mottled with blackish and white. In late afternoon moved down again toward Durango, but at dark setup camp about 14 mi. E of Llano Grande. General notes: Weather, except for very cold night last night, extremely mild and pleasant with seldom a wisp of a cloud. Road between Juarez and Durango excellent except for short detours where bridges being constructed or repaired. Road to El Salto from Durango wide but corduroyed and travel limited to about 20 mph. This is dry season throughout area traversed. and little color but browns in landscape except in cultivated valleys along

W. Riemer
1950

Journal

19 Mar. Mexico; Durango: streams where cottonwoods a vivid green. Range land and cultivated areas appear everywhere well tended and intelligently managed.

20 Mar. Mexico: Aguascalientes: Left our camp west of Durango after taking several scrub jays and a woodpecker and noting a large number of other species. On trip down to Durango stopped few moments at bottom of Rio Chico to look in large stream pool for Ambystoma larvae in hopes one not taken at El Salto camp could be replaced. No luck! From Durango drove through Fresnillo, Zacatecas to point north of town of Aguascalientes where camp set up for night. Points along the way: Nombre de Dios a small town with detour through old cobblestone streets. Appears to be first really unspoiled town seen. How long will such a condition last? Zacatecas a truely beautiful town with many new improved features being installed. Camped 10 mi. N Aguascalientes and took two Rana pipiens

21 Mar. Mexico: Queretaro: Drove to Irapuato and spent most of afternoon visiting with Mr. Chester Lamb and family. Very hospitable. Continued on in late afternoon to camp for night just outside of town of Queretaro.

W. Rienier
1950

Journal

22 Mar. Mexico: Distrito Federal: Drove into Mexico City during morning and will stay in auto court tonight taking care of business matters during afternoon. Comments: the highway between Irapuato and Mexico City is less good than highway N of Irapuato. Heavy traffic has broken it considerably. Weather is still splendid. Lamb informed us yesterday that in Irapuato it never gets hotter than it was yesterday about 75-80° F and never cold enough to require heating. Irapuato is center of strawberry culture and that fruit available throughout year.

23 Mar. Mexico: Oaxaca: Drove from Mexico City to point several miles NW Oaxaca de Juarez where camped for night. Road not as good as that N of Mexico City but still good for 35-40 mph. Between Mexico City and Puebla one climbs to about 10100 ft. into dense pine forest. Heavy frost on ground. Much snow on both Popocatepetl and Ixtaccihuatl

24 Mar. Mexico: Chiapas Drove all day to reach point several miles W of Tuxtla Gutierrez to camp for night. Vegetation became truely tropical on nearing Tehuantepec. Papaya, mango and coconut palms common. Some forest plants now blooming or starting

W. Riemer
1950

Journal

24 Mar. Mexico: Chiapas: to leaf, though most of forest areas still very brown and dormant. Beyond Tehuantepec mountains become very rugged and, today, cloud shrouded. Rain showers locally in afternoon, all of which light.

25 Mar. This morning before breaking camp collected a few birds. Locality: 25 mi. W Tuxtla Gutierrez. Took one Magpie Jay in large tree which it flew into, ~~—~~ one of a flock of perhaps a dozen. Several small birds accompanying flock. On dead bird's dropping to ground, other jays in flock flew down to within few feet scolding at me. A second shot caused all to fly away. Left this spot and drove to Tuxtla. Tuxtla has large outdoor contour map of state in plaza. Several Uta-like lizards sunning on it. In town visited Sr. M. Alvarez del Toro at the Museo. He has here a small but excellent collection of Chiapan mammals, birds and reptiles. All appear in excellent health and seem well cared for. Both living and mounted specimens are present. He has done a superb oneman job here. At his home he also showed us very fine colored plates he is preparing on Chiapan birds. Following is a list of local and

Journal

W. Riemer
1958

25 Mar. Mexico: Chiapas: scientific names taken from some of the labels of his zoo:

Heloderma horridum – "Escorpion" – Alvarez says local ones all black. Is this a new race?
Crocodrilus – "Lagarto"
Ctenosaura – "Iguana" ("verde" and "negra")
Agkistrodon – "Cantil"
Botthrops – "Nauyacá saltadorá"
Crotalus durissimus – "Cascabel tropical"
Boa constrictor – "Boa"
Constrictor constrictor – "Mazacuáta"

In afternoon drove on to point 6 mi. SE San Cristobal, 7300 ft.± where camp set up just before dark. Camp in open pine forest with adjacent meadow. Road beyond Tuxtla very poor but currently under construction.

26 Mar. Mexico: Chiapas; 6 mi. SE San Cristobal, 7300 ft.
This is first day in first permanent camp. Camp being established until about 0900 in morning after which time I worked semi-open woods of pine and broadleafs to E of camp. From 0900 until 1200 was able to get no birds. Wind, dry leave mat and lateness of hour all probably contribute to poor score. In afternoon worked W-ward through semi-open woods and in a

W. Riemer
1950

Journal

26 Mar. Mexico: Chiapas: 6 mi. SE San Cristobal, 7300 ft.
fallen log and several dead stumps took 10 Bolitoglossa salamanders and one Sceloporus. Also took a couple of warblers. Weather clear sunny and warm in morning; same in afternoon except sun occasionally obscured by cloud mass. Very comfortable weather. Pulled down and examined about six small (1 ft. in dia.) bromeliads. All contained some water and various insects but no vertebrates. Under piece of bark on ground found one small snake in afternoon. Hoford in evening took 2 Ranas and 4 Hylids from spring where we get our water. Spring few feet from dirt road passing thru area.

27 Mar. Morning cold and slightly overcast before 0900. During early hours took a pepper shrike near camp. After warmed up took 2 kinds of fly catchers and a trogan. Rest of morning, all afternoon and evening spent putting up yesterday's and today's catch. Took one Anolis in camp.

28 Mar. Camp guard and cook today. In morning, early, shot junco and warbler in camp. In evening at dusk shot one bat (Eptesicus?) on wing over small forest clearing. Many bats present. Later shot one unknown sort over water with aid of flashlight at spring. Ranas and Hylas

W. Reimer
1950

Journal

28 Mar. Mexico: Chiapas: 6 mi. SE San Cristobal, 7300 ft.
both still present. Eye shine of both excellent. Many bats present also at spring. Since arriving here clouds have moved from S to N. This afternoon moved from N to S. Light showers of big drops of rain in early evening. Temp. in morning seems to be low, rising rapidly with sun to high of about 30 at midday and slowly falling in afternoon when breeze comes up, and rapidly when sun decends.

29 Mar. Spent morning SW of camp on adjacent ridge where Koford and Pitelka had good hunting on the two previous days. Took 3 Aphelocoma unicolor a solitaire and robin. Also 3 more Bolitoglossa salamanders in rotten log and under bark. In this canyon and on ridge timber denser and taller and whole appears more moist, probably due to almost continuous fog rolling over ridge. Vegetation of more tropical character. Afternoon in camp. This morning just prior to dawn light showers came and occasion ones throughout day. None enough to more than dampen things. Toward evening and after dark gusty wind blowing. Day almost completely and heavily overcast.

30 Mar. Spent three hours of morning pulling apart bromeliads on ridge to SE of camp. Many invertebrates present

W. Riemer
1950

Journal

30 Mar. Mexico: Chiapas: 6 mi. SE San Cristobal, 7300 ft.
but found only one salamander which I take to be the same species as those taken in rotten logs and under bark on previous days. In early afternoon took two Balanosphyra formicivora on ridge near where bromeliads were. Both perched in open trees. A jay's nest located nearby in broadleaf shrub about 20 ft. off ground. Jays, Aphelocoma unicolor, at first scolded considerably but later left and did not return for over an hour when area deserted. They had not moved far off however since a scolding note uttered with each shot I made at other birds. Lower down canyon in dense growth took a robin, Turdus rufitorques and a Ergaticus versicolor, warbler. In late afternoon in open scrub took a Dendroica townsendi, warbler. Weather, until about 0930 heavily overcast, then until about 1600 sunny but with many clouds racing overhead so that little sun got through for more than a minute at a time. Wind and little sprinkles and drizzles after 1600 well into night. Winds from NE.

31 Mar. Camp cook and guard today, did no shooting spent day putting up specimens taken yesterday. Weather cold but mostly clear after continuous light rains during night.

W. Riemer
1950

Journal

1 Apr. Mexico: Chiapas: 6 mi. SE San Cristobal, 7300 ft.

Spent entire morning and first half of afternoon in and around cleared area SE of camp. Objective: to see if the two local species of Sceloporus are in any way segregated ecologically and to collect series of each. Took 4 of blue-bellied species and eight of orange-bellied species in that cleared area. No segregation evident. Also took Bothrops and Pituophis in early morning before place well warmed up. Also got two salamanders under bark of stump in cleared area but could find none in thick damp spot of lush vegetation at edge of clearing. Took a humming bird, a bushtit and a vireo on trip to and from area. In evening shot red bat on the wing. Weather during day warm and sunny without wind. At night, sprinkled intermittently for several hours.

2 Apr. Because of intermittent light rains during night I got very little sleep, felt lousy and stayed in camp working on specimens until late afternoon. At that time shot flycatcher and a thrush near stream. Worked way about a half mile down stream. At no place is stream large but it does include a boggy,

W. Reimer
1950

Journal

2 Apr. Mexico: Chiapas: 6 mi. SE San Cristobal, 7300 ft.
grassy patch at section where the flow, perhaps a foot wide, traverses a grassy meadow-like area. There is also a section where it flows with a series of miniature waterfalls and rapids through a wooded area. Such areas are perhaps big enough to support special riparian species. Rana pipiens noted throughout stream length except in wooded area. Tadpoles present even here however.

3 Apr. Camp guard and cook today. In early morning shot a tanager and a flycatcher and a warbler in vicinity of camp. Put up specimens until late afternoon when I shot in camp vicinity a stellar jay and a another species of warbler. Also about midday caught a Eumeces in camp area. After dark returned to boggy portion of stream and by flashlight was able to find only Rana pipiens. In vicinity of spring however where trees are present I found more pipiens but also a Hyla. Took sample of tadpoles present in spring. Weather today clear, warm and sunny. Gusts of wind occasionally. Evening clear starry and cold.

4 Apr. Weather: warm, sunny. Returned in morning to cut-over area to obtain photos of

W. Riemer
1958

Journal

4 Apr. <u>Mexico: Chiapas: 6 mi. SE San Cristobal, 7300 ft.</u>
habitat of the two species of <u>Sceloporus</u>, of <u>Bothrops</u>, <u>Pituophis</u> and <u>Bolitoglossa</u>. That was done. Also I went to top of ridge to W of cut-over area the ridge where Pitelka has been watching jays. On way up I took a red-faced warbler, an acorn woodpecker and on top a hummingbird. The top of this ridge is densely covered with vegetation but not of the high pine sort on the opposite more open ridge. Here bromeliads are very abundant, low on trees as well as in the upper branches and broad leaves predominate. On returning to camp took one <u>Sceloporus</u> on rock on steep slope leading to ridge. C. Koford later in day brought in one of each of the two species of <u>Sceloporus</u> from this area as well as a salamander. Afternoon spent putting up skins. In evening shot pewee near camp. This is the last of ten days at this camp. During that time took three species of snakes, four species of lizards, one species of salamander and two species of anurans.

5 Apr. <u>Mexico: Chiapas: 28 mi. ESE Comitan, 4900 ft. San Jose</u>
Broke camp in morning and drove virtually all day to this locality. The road to Comitan is dirt but no doubt passable in any weather. Beyond Comitan the road is a mere

W. Riemer
1950

Journal

5 Apr. Mexico: Chiapas: 28 mi. ESE Comitan, 4900 ft., San Jose

track certainly impassable in wet weather but firm and dry today. It is used by just enough vehicles to keep it evident as a road in many places. Beyond Comitan it passes through overgrazed grasslands and pine-grass parkland. This parkland must be very beatiful in the late wet season. At present it is dry and brownish. Near San Jose it adds a tropical touch in the form of islands of jungley vegetation and such is present especially along the water courses. Beyond Comitan the weather was very strange in that a high but dense haze hung over the entire landscape making the hills only about five miles distant nearly invisible. Just a dusk a heavy downpour occurred at camp turning the road to slippery mush. The rain lasted perhaps a half-hour or slightly more. Immediately prior to the rain I took two sorts of Hyla in camp. After the rain found a Ranid in a stream pool.

7 Apr. In morning worked downstream toward lake to our N. Did not go far. Took an Aphelocoma unicolor, Colaptes cafer, Myiarchus and a Contopus pertinax. Weather was cloudy and poor for reptiles

W. Riemer
1950

Journal

7 Apr. Mexico: Chiapas: 28 mi. ESE Comitan, 4900 ft., San Jose

but was disappointed to find nothing under the large number of pieces of log and debris turned over. Broke apart four large (3 ft. dia.) bromeliads but found no salamanders or frogs. Did collect ~~two~~ chiton-like invertebrates from the bromeliads. N of camp in the area transversed the terrain undulates slightly and is covered by a pine, semi-open forest; broadleaf trees occur scattered among the pines but are not abundant. Along the stream course (contains only a few small scattered pools at present) there is a dense jungle tangle of tall broadleaves, vines and low shrubs. In open areas in the pine forest are frequently blackberry-scrub (1-2 ft.) oak thickets.

8 Apr. Went S-ward today. A ridge about a 1/4 mi. from camp provides a good view of the surrounding terrain. The west appears to be less forested in the distance. To the north, the long narrow lake with forested ridges beyond. The east, toward Guatamala with only mountains and dense forest. The view south is impaired by similar small ridges as the one I was on. The second ridge from camp has a very dense jungle growth on the windward eastern side. In going through this dense growth I apparently disturbed a

W. Riemer
1950

Journal

8 Apr. Mexico: Chiapas: 28 mi. ESE Comitan, 4900 ft., San Jose.

hiding place of a murine opossum which promptly ran up a small tree. It was shot. On the leeward side of the ridge the growth is of oaks and agave, thistle and small shrubs. An Aphelocoma unicolor was taken in the pine woods and a Trogon mexicanus at the edge of the stream-course jungle. Again a large number of pieces of surface litter were turned over but no reptiles or amphibs. This place is apparently no so damp at night as the previous locality and the under side of bark of fallen logs in exposed places is never wet enough for salamanders; also the bark is seldom very thick.

9 Apr. Camp cook and guard today. Shot a Sialia in camp and put up several of Kofords birds. In afternoon took 2 young Rana pipiens a margin of small pool in opening in pine woods. Weather: windy but warm and sunny.

10 Apr. Spent entire day in field. Walked almost as far as Montebello. First took coral snake under small log just beyond Tierra Blanca. Then found several Ranids of two species at edge of small muddy pool nearby. Also at this pool took one very small Hylid. A few hundred yards away searched vicinity of sedge marsh for Thamnophis but found none.

W. Riemer
1950

Journal

10 Apr. Mexico: Chiapas: 28 mi. ESE Comitan, 4900 ft., San Jose.

Did however shoot a reddish egret and noted presence of a shore bird about size of willet. Beyond San Jose in region of limestone outcrops, bracken fern and many fallen trees shot or noosed two species of Sceloporus and noted a third large sort, took a species of Anolis and on return found a Thamnophis killed by natives on road. At some distance beyond San Jose came upon lake of clear, amazingly blue water. Shores barren except for small rocks and sandy-muddy beaches. Saw no shore birds. On a grassy flat near lake noted a Sceloporus but not successful in taking it on species remains a mistery. Noted only that it had two very light (cream) stripes longitudinally, on brown dorsum. Took differently patterned R. pipiens under another piece of board. On returning home noted presence of orange-throated species of Sceloporus on pile of cut wood very near Tierra Blanca. This is species objective of trip to vicinity San Jose. Also near pool where ranids and hylid taken found DOR Bufo or Scaphiopus in roadway. Beyond San Jose pine woods become mixed woods of pine and broadleaves and terrain

W. Rienner
1950

Journal

10 Apr. Mexico: Chiapas: 28 mi. ESE Comitan, 4900 ft., San Jose

more hilly. This eventually gives way to quite hilly country near Montebello covered with rather dense jungle vegetation. Weather all day sunny and warm.

11 Apr. Camp guard and cook today. Put up some birds and reptiles and amphibians. No hunting. Weather sunny and clear.

12 Apr. Went north to lakeshore in morning. On way ~~there~~ through pine woods shot a robin, a flycatcher and two ivory-bill woodpeckers. Swallows flying at lake over marshy sedge and grass area at borders. Weather windy and occasional short showers. Warm. In evening returned to lake with Koford. After dark above mouth of stream took five Rana pipiens showing a variety of spotting from much to none. A very few frogs present in grass (6-8 ft. tall) at marshy edges of lake, but abundant along streams entering lake.

13 Apr. While trying to shoot bats entering a bat tree at dawn was able to shoot a tree squirrel in a oak. (See catalogue C. Koford). Spent most of day in camp putting up specimens from yesterday and day before. In afternoon went to densely wooded jungle slope to examine bromeliads for amphibians. Pulled apart three

W. Riemer
1950

Journal

13 Apr. Mexico: Chiapas: 28 mi. ESE Comitan, 4900 ft., San Jose

large plants (3 ft. in dia.) and about a half-dozen smaller plants. Found no vertebrates. Had set a string of 10 museum special traps near stream course in dense jungle growth near camp. No catch by bedtime.

14 Apr. Camp guard and cook today. Put up skins all day. Saw a *Eumeces* in semi-shade in grass in camp during midday hour but could not catch. Found freshwater crab under rock in dry pool in stream. No catch in traps this morning though one trap sprung and dragged a short distance.

15 Apr. At dawn Kofford and I walked to jungle area beyond Montebello. Arrived about 0900. Hunted until shortly before 1300 in jungle growth and then returned to camp to put up skins. In jungle I took a solitaire, a toucan and a sparrow (*Arremonops*) feeding on branches of tree ~~(Arremonops)~~. On return to camp took two *Sceloporus* of two species and two *Anolis* in mixed semi-open woods. Also took two cactus wrens. No catch in trap line by stream bed.

16 Apr. Spent day in camp skinning birds. Pitelka brought in a green coluber for me. Kofford and I set out new trap line in dry stream bed a short distance downstream from camp. A native informs us that a terrapin lives in one of the nearby lakes.

W. Reimer
1950

Journal

17 Apr. Mexico: Chiapas: 28 mi. ESE Comitan, 4900 ft., San Jose

In morning Koford and I, led by a native of Tierra Blanca went down to the lake to look for a "red red heron" reputed by the natives to be there. Hunting along the way I took two chipping sparrows. At the lake, just west of the area visited a few days previous I got a mockingbird and a yellowthroat. The native shot the icterid. The herons were not present on arrival at the lake, but noted were coots and pie-billed grebes. While walking along the shore in returning to camp got another yellowthroat in the sawgrass along the edge of the water and saw (taken by Koford) a large hawk circling overhead. This bird offered a lively and lucky chase through the surrounding woods. A group of toad larvae were taken at the edge of the lake in shallow water near a growth of small sedges. A toad was taken in a trampled grassy area a little distance from the lake in a marshy sawgrass area. It is not certain who actually shot the other birds taken today. Two rodents in trap line.

18 Apr. Camp cook and guard today. Took one ant-eaten <u>Peromyscus</u> from trap line in morning. This is first mammal ever put up. Rest of day spent in putting up yesterdays skins. Koford brought in another of the green vine snakes that Pitelka found the other day.

W. Reimer
1950

Journal

19 Apr. Mexico: Chiapas: 28 mi. ESE Comitan, 4900 ft., San Jose

Walking S to San ~~Jose~~ Antonio and then downhill SW to arid thorn scrub area. In thorn scrub took one of many Troglodytes musculus. Lower down saw two Cnemidophorus (in size and pattern much like C. tesselatus) chasing one another. No successful in capturing them. No other lizards seen. Shot three Caprimulgus which were flushed within 5-10 minutes walking along small game trail. They are slow in rising in flight seldom getting above the shrubbery and after 50 - 100 ft. of flight settle back to perch on ground. Flush when one approachs to within about 50 ft. Two taken on wing, one while perched on low stump. Noted presences also of bluebird, mockingbird, solitaire and an oreganus-like Junco. Occasional large junipers present. In returning to camp shot a Xiphocolaptes in open pine woods.

20 Apr. Kofod, I and a guide made trip to del Arco a series of limestone caves beyond San Jose and near village of Arco. In going and coming from area shot a Xiphocolaptes, a Piranga and two Campylorhincus. In addition got two Anolis and two species (three specimens) of Sceloporus. A pool down in the bottom of the largest cave visited had an anuran

W. Reimer
1950

Journal

20 Apr. Mexico: Chiapas: 28 mi. ESE Comitan, 4900 ft., San Jose

calling and saw one small tadpole but was not successful in capturing either. Not bats nor amphibians in caves except as noted. One of natives from Tierra Blanca found a Bufo in the stream bed near camp.

21 Apr. Broke camp and drove to vicinity of Tuxtla Gutiérrez to camp for night. Stopped in Comitan to buy sabanas.

22 Apr. Visited with Alvarez de Toro at Tuxtla Gutierrez Museo and after shopping in town drove on to spot about 50 mi. S Oaxaca to camp for night.

23 Apr. In morning on way to Oaxaca picked up a snake on highway. Visited short time with aftosa (hoof and mouth disease) people in Oaxaca and then drove on to camp a short distance from Ixtlan in mountains NE of Oaxaca. Short distance from Oaxaca picked up large Sceloporus along road to Ixtlan.

24 Apr. Mexico: Oaxaca: 25 mi. NE Oaxaca, 6200 ft., Ixtlan

Camp guard and cook. Put up two of Koford's birds and late in evening captured a Sceloporus hiding between a beam and the wall. Heavy but short rain at dusk. Road into this place well traveled by buses and trucks. It is very steep in spots and is not passable when wet.

W. Rieman
1950

Journal

25 Apr. Mexico: Oaxaca: —— Broke camp near Ixtlan because of lack of suitable spot in which to camp away from the hordes of people. Spot near Cerro San Felipe selected as new camp but abandoned in a few hours because of unfavorable steep terrain, heavy population and excessive agricultural use of land. Drove in afternoon to spot 150 mi. from Puebla where camped for night.

26 Apr. Mexico: Distrito Federal: —— Drove into Puebla and on to Mexico City in morning stopping only to pick up a Pituophis near Mexico City. Stayed in city for night.

27 Apr. Mexico: Guerrero: 3 mi. W Omiltemi, 8200 ft.
Leaving Mexico City early, drove S directly to Chilpancingo, then west on a very rough steep dirt road to this locality on the ridge above Omiltemi. [about 1 mile beyond]. Between Mexico City and Cuernavaca one climbs over a ridge of mountains with much good pine forest and tall grasses. Beyond Cuernavaca the terrain is all overworked and overgrazed. The road, though paved, is not smooth anywhere. Chilpancingo lies in an arid valley of almost barren land. Rising up on the way to this locality one passes quickly into a palmetto zone which persists some time until one reaches oaks and pines. Omiltemi is a lumber mill town well up in the pines.

W. Riemer
1950

Journal

27 Apr. Mexico: Guerrero: 3 mi. W Omiltemi, 8200 ft.
Set out line of 10 traps (specials) and one Schuyler on dry ridge in pine-oak open forest near camp. Much slash waste about.

28 Apr. At base of large pine caught a Peromyscus in trap line. Caught a Barissa? lizard in camp tent. Put up a couple of birds from Koford's catch. Guard and cook today. In afternoon went to canyon with small streamlet with Koford to set line of 25 snap traps, 4 Schuyler's and two steels. On way took a second Barissa(?), a Gerrhonotus and in the trap line area two species of anurans. On return found 3 small Batrachoseps-like salamanders in a rotten log.

29 Apr. Very good catch in trap line. Eight animals - 7 large mice and 1 shrew. All put up by Koford. On return to camp in morning from trap line shot several birds, as noted in catalogue, along road. Pitelka took a Gerrhonotus near camp.

30 Apr. Went S-ward around hill on which camped into a dry open pine forest area. Took a Eumeces under bark of stump and several Sceloporus on logs when reentering the denser mixed forest area. Put up one of rats from trap line. Catch today of two shrews and three rats. I put

W. Riemer
1950

Journal

30 Apr. Mexico: Guerrero: 3 mi. W Omiltemi, 8200 ft.

up one of the rats and a bird of Koford's. In evening Koford and I walked down to Omiltemi in the hopes of taking a snake on the road, looking for anurans in the stream and shooting bats ~~over~~ a concrete water basin just above Omiltemi. A few bats seen flying after dark but no good shots were presented. Did not start flying until too dark. There were many (about two dozen) snake tracks crossing dusty roadway in about three and onehalf miles down to Omiltemi, plus several lizard tracks. Most snakes apparently headed downhill. In one spot track started with a rough loop near edge of road as if snake had simply fallen off overhanging ledge of roadcut ~~about~~ above. Is this the usual method of solving the problem of steep roadcuts? No snakes seen though a Borissa apparently killed by a native was found at the edge of the road. Only one anuran, a hylid, was taken by ~~eye~~ eye shine at edge of stream immediately above concrete pool. It later escaped in some unexplained way. No animals taken on return to camp. A few tadpoles taken from concrete pool and stream. Same kind present just below camp.

W. Riemer
1950

Journal

1 May <u>Mexico: Guerrero: 3 mi. W Omiltemi, 8200 ft.</u>
Guard and cook today. Put up two rats taken in trap line and two garter snakes taken by Pitelka in areas below camp. I found and *Anolis* in camp while looking for a mouse skull I accidently tossed out. Just before dark Koford and I reset our joint trap line a short distance down stream and partly a short distance up slope from original. Again 25 specials, 3 Schuyler's, 1 steel. After dark I found one more of the *Batrachoseps*-like salamanders in a rotten log and together [Kof[illegible]] we found five anurans in and near stream, of two species.

2 May In morning before leaving this locality I put up a rat taken in our new trap line and also a very young *Gerrhonotus* taken in camp area. These *Gerrhonotus* are very reminiscent of *coeruleus* of the Bay Area. About noon drove to Chilpancingo taking two new *Sceloporus* near Omiltemi and a still different sort near Chilpancingo. Then continued on to Acapulco for night. On way to coast captured an *Oxybelis* on the road. Between Chilpancingo and Acapulco one passes through arid forest and thorn scrub — much like chapparal (very brown and dry at this season.) Acapulco itself appears much like Hermosa Beach or Newport in So. Calif.

W. Riemer
1950

Journal

3 May Mexico: Guerrero: After looking at sea turtles in water at Acapulco drove back to Mexico City for night taking a Ctenosaura and a coral snake on the roadway, both DOR.

4 May To Mexico: Hidalgo: After shopping around Mexico City in the morning left about noon and drove through to spot near Jacala to camp for night in pine-oak mountains. Terrain here is very steep, rugged and mountainous.

5 May To Mexico: Tamaulipas: Drove from near Jacala to near Linares during day. Most of distance through low, green, dense, thorny scrub. Hot and humid. Heavy dense haze everywhere.

6 May To Mexico: Nuevo Leon: Drove to Monterrey for night. Short stop at Cola de Caballo waterfalls near Monterrey produced one small anuran taken at base of falls in a small pool.

7 May To Mexico: Tamaulipas: Nuevo Laredo Drove to border and crossed in late afternoon.

8 May to 12 May To Calif: Alameda Co. With one day delay in Laredo drove directly home stopping for night at Kerrville, Texas; Las Cruces, New Mexico; Needles, Calif.

W. Riemer
1950

Journal

17 May <u>Calif.: Contra Costa Co.</u> During afternoon visited both study areas to determine at what stage of development <u>Triturus</u> populations were. This is first visit since middle of February. At Lafayette Reservoir between 1400-1445 hrs. No Triturus present under boards (too dry except under those near water's edge) and none seen in water. Sow bugs very abundant under boards. Small pool, isolated from lake where so much breeding activity noted in February, now dry. Marked one new <u>Hyla</u>. At Pinehurst 1515-1730 hrs. Stream now consists of quiet pools joined by short areas of rapid flow. Most of deep pools present last year now filled in and only three deep pools remain. These pools at 103.2-2.2, 103.0-5.4, 104.9-5.3. Adult <u>Triturus</u>(3) found only about the first pool listed. Here also were the only egg clusters seen. 15 counted in quick search. Two or more catfish (?) (18" long) seen in last pool listed. Under boards found 2 <u>Ensatina</u>, one very young, one subadult. About 20 <u>Batrachoseps</u> counted. Two <u>Triturus</u>, one young, one subadult taken under boards.

21 May <u>Calif.: Sonoma Co.</u> Day spent inspecting several ponds in this county. Objective to

W. Riemer
1950

Journal

21 May Calif.: Sonoma Co. find a spot suitable for a permanent study area for T. granulosus in the north bay counties. In the vicinity of the Sonoma State Home just S of Glen Ellen are four ponds of considerable size. The two southernmost lie on private estates owned by one man apparently. Both with large numbers of R. catesbiana and therefore quite likely not suitable for Triturus. Two T. granulosus however taken in pool of almost dry stream near southermost lake. The two northern lakes on State property. Did not see one W of State Home but lake N of Home with very steep sides, no border vegetation and probably not good for Triturus. Also inspected pool about 2 mi. W Kenwood. This pool on property of Annadel Farms with hdqtrs of State Hwy 12 almost due N of lake. (Address: Route 5, Box 464, Santa Rosa! Mr. Hillman) Lake shallow and with dense reed growth over most of surface. No R. catesbiana evident but no Triturus seen. The reluctance to admit people to that property more or less precludes study here. Quite likely not suitable for Triturus. Also inspected Santa Rosa Reservoir a 1 or 2 mile distance E of Santa Rosa. Caretaker very willing

W. Riemer
1950

Journal

21 May Calif.: Sonoma Co. to be helpful and lake looks good for Triturus. Caretaker says both "orange" [torosus] and "black" [granulosus] present. Lastly inspected Sonoma Creek along road adjacent to Creek S of Kenwood. Apparently this is public domain and though no Triturus seen today the stream looks good for the animal. This stream may be used for study area for T. granulosus if the population seems to be dense enough next spring.

25 May Calif.: Contra Costa Co. Visited both Triturus study areas to determine activities of adults and development of eggs. At Lafayette Reservoir 0930-1045. Clear, sunny, warm. No adult Triturus under boards (too dry except in immediate vicinity of water) and none in water in vicinity of study area. Careful search made along shore. However larvae present along shore in shallow area (6" deep). Apparently two size groups present:
2 cm long in total length — 4-5 individuals,
3½ cm long in total length — 1(?) individual.
Air 15°C, water at shore 19°C. Many adults present in water along face of dam. See species account. At Pinehurst 1115-1245 hrs. Saw Triturus

W. Riemer
1950

Journal

25 May Calif.: Contra Costa Co. neither under boards nor in water. One R. aurora marked, the first seen in area. Also saw one young T. elegans terrestris but not marked. Egg clusters at 103.2 - 2.2 with rough exteriors and opaque layer of silt covering them. Many larvae hatched already but most still in clusters. Again the adults disappear just as eggs begin hatching. Do the eggs or larvae secrete a substance initiating this response of the adults. No additional clusters than the 15 counted last week seen. Fish (catfish?) also not present this week in deep pool. 1200 hrs., water 11.8°C, air 13.8°C. Also examined former upper portion of study area (now abandoned). No eggs where laid last year, no adults, most of pools now filled with silt and gravel.

1 Jun. Visited both study areas to determine progress of adult and larval Triturus. At Pinehurst 1100 - 1200 hrs. 1130, water 13.8° C; air 17.5° C. Most of egg clusters at 103.2 - 2.2 now without larvae and much degenerated. Only one cluster still with apparently most of larvae. Two larvae seen in water within few feet of clusters. One 15 mm. long. Shallow water

W. Riemer
1950

Journal

1 Jun. Calif.: Contra Costa Co. with gravel bottom. No adults. At Lafayette Reservoir 1230-1300. 1300 hrs, water 23.0°C; air 19.8°C. Larvae noted near shore of cove but only where water clear, quiet, mud bottom, clean edge. Near by where ½-1 in. waves had piled up cattail stalks and other debris no larvae seen even though water very still behind this barrier. Larvae 23, 30, 35 mm. Few adults on concrete apron of dam. Are they leaving water only now, and if so where do they go? The soil except the immediate edge of the lake is parched. Last of wild grasses on hills thoroughly dry. Did not inspect boards in either area since believed to be too dry.

30 June Calif.: Contra Costa Co. Visited briefly both Triturus study areas. Larvae at Pinehurst not well developed and many fish present. (species? 9-51) Also noted here were Thamnophis sirtalis atratus with large amount of red on venter; a Rana aurora with a left fore foot missing both just below site of egg laying. One Triturus juvenile seen abroad. Weather hot. In very shallow stream below EBMUD bridge between Pinehurst and Moraga larvae of Triturus

W. Riemer
1950

Journal

30 June Calif.: Contra Costa Co. considerably further along in developement. Many larvae of Hyla(?) also present. At Pinehurst noted a Eumeces (young) run across roadway in bright very hot sun at midday. At Layfayette Reservoir some Triturus larvae very well developed along dam face. Young, apparently recently metamorphosed, Hyla regilla very abundant. No waterfowl. A Thamnophis, probably (species ? 9-51) sirtalis atratus at edge of lake.

7 Aug. On pleasure trip drove to Mt. Diablo summit and back today. Noted that top of peak still within Upper Sonoran and Digger Pine confined to last few hundred feet. Only herps seen during day were several, but not many, Sceloporus. Birds abundant. Weather, warm and sunny. On return stopped at Lafayette Reservoir for few minutes. Triturus larvae absent from dam face and none seen in cove, but several of different sizes noted on muddy bottom by depth guage. None under boards at edge of water.

23 Sept. Calif.: Contra Costa Co. 1000 – 1130 at Pinehurst study area. Found two juvenile Triturus one large Rana aurora and a single Batrachoseps. 1130-1230 at

W. Riemer
1950

Journal

23 Sept. <u>Calif.: Contra Costa Co.</u> Lafayette study area. <u>Triturus</u> now metamorphosing. Took one predator of <u>Triturus</u> a young <u>Thamnophis</u>. Young <u>Hyla regilla</u> common and saw one large <u>Rana catesbeiana</u>. Weather, warm, sunny, clear.

30 Sept. Visited both <u>Triturus</u> study areas during morning. Pinehurst 0945-1015 hours. At 1015 air 14.2° and water 8.5°C. No specimens of <u>Triturus</u> seen including larvae in pool below drain pipes. Must be present in this large pool which remains 12' in diameter. Other small pools present last week now gone. In few moments while at pool several Chestnut-backed Chickadees, a Brown Creeper and a Winter Wren. All came to drink and did so within 10-12 of me. At Lafayette Reservoir 1100-1130. 1125 hours air at 21.0 and water 22.4°C. Only <u>Triturus</u> seen were under board on wet soil at edge of water. Count of young metamorphosed animals will be made each week. 139 present today. Many still showing stripings, spottings and gill stubs.

7 Oct. Visited both <u>Triturus</u> study areas. At Pinehurst 0930-1015 hrs. Air 13.5°, water 9.7°C at 1015 hrs.

W. Riemer
1950

Journal

7 Oct. Calif.: Contra Costa Co. Larvae still present in pool beneath drains and about same size as before. One measured as 20 mm. total length. Pool about same size as last week but now murky. Two ~~animals taken~~ #101 ~~303~~, a repeat capture, and 102b a Rana aurora. At Lafayette Reservoir 1115–1130 hrs. At 1130 air 24.7°, water 24.0° C. 149 metamorphosed Triturus counted under test board. Some still appear to be freshly metamorphosed based on present of dorsal stripes, tail spots and presence of gill stubs.

14 Oct. Visited both Triturus study areas. At Lafayette Reservoir 1150–1245 hrs. 1220 hrs. air 21.5°, water 22.0° C. 160 young Triturus counted ~~taken~~ under test board, some appear freshly metamorphosed others apparently metamorphosed some time ago since all trace of gill stubs and larval markings gone. Some even appear to be growing larger. One emaciated adult ♀ under board in intimate association with young. This one preserved for record of condition of gonads and stomach. Several young also collected of which one preserved for stomach contents and 10 to be kept alive if possible for growth observations. Water level of lake down by 6"–1' which

W. Riemer
1950

Journal

14 Oct. Calif.: Contra Costa Co. leaves test board at very upper edge of wet zone of soil. Several young Triturus thrown back into water. All quickly swam to bottom to hid in bottom debris. No sign of any swimming about in lake though several attempts made to see such if present. Do they hid in bottom debris during day? At Pinehurst 1315 - 1415. At 1410 hrs. air 18.5°C, water 10.5°C. #102a, a Rana aurora recaptured. Many larvae still present in pool below drains and several brought back for observations on growth.

21 Oct. Checked both Triturus study areas today. At Pinehurst 1115-1215 hrs. 1130, water 9.8°C in pool below drains, air 13.6°C. Larvae still present in pool, water murky, level of water slowly dropping though pool still 10-12 ft. across. One Triturus taken #103. Slight amount of rain early in week but not enough to moisten soil. At Lafayette Reservoir 1245 - 1330 hrs. No temp. taken. Water level about six inches below last week. 188 young Triturus taken under test board. Soil underneath still wet. Cattails not actually in water are drying. Young Thamnophis elegans atratus(?) seen near test board. Photographed area. Weather, warm and clear.

W. Riemer
1950

Journal

23 Oct. Calif.: Contra Costa Co., Pinehurst.

Salamander census of road between Pinehurst and Canyon made this evening after first fall rain. Rain had stopped for the day with 0.41 in. in Pinehurst rain guage. Road covered between ~~1045~~ 2245 10:45 pm and 0015 hours. walking with lanterns from Pinehurst to Canyon and return. Rich. Zweifel and myself each covering half of roadway, apparently no animals except possibly *Batrachoseps* overlooked. Following is total count.

Triturus torosus 89
Ensatina eschscholtzii 34 (one a very tiny juv.)
Aneides lugubris 11
Batrachoseps attenuatus 19
Hyla regilla 2
Rana aurora 1

Five of *Triturus* captured for stomach contents and gonad development.

28 Oct. Calif.: Contra Costa Co. Lafayette Reservoir

0845 -1015 hrs at *Triturus* study area. 0845 air 15.5°C, water 17.0° c. Water level down several inches from last week. Heavy rains all during past week and soil thoroughly wet though weather today clear and sunny. Only one metamorphosed *Triturus* under test board. Under boards on hillside above

W. Riemer
1950

Journal

28 Oct. Calif.: Contra Costa Co., Lafayette Reservoir

the cove were ~~six~~ seven very young *Triturus* each of which marked (# 26-32). Presence of young *Triturus* about 250 ft upslope from water noted. Some of these may have followed up relatively open ground of fire trails though some must have gotten to their spot through at least some of the dense mat of dried wild grass on slopes. Three of marked animals on ~~crest~~ crest of hill. All must have moved uphill during past week since very dry before that time. Since none(?) in numbers near shore must be strong stimulus to wander uphill after first rains of fall. One *Hyla* 500 ft (about) up slope in dense grass some distance from nearest trail. Also two *Aneides lugubris* on ridge, one *Thamnophis elegans atratus* on slope near water.

28 Oct. Calif.: Contra Costa Co., Pinehurst

In area 1045-1215 hrs. 1215 hrs air 17.0° C, water 12.5° C. Stream flowing slowly, clear. Soil wet. Weather cool and overcast. Pool below drains almost to point of overflowing but as yet no water running here. Three new *Triturus* adults marked #104-106. Seven *Batrachoseps*, one *Ensatina* seen.

W. Riemer
1950

Journal

4 Nov. Calif.: Contra Costa Co. Pinehurst. Visited only this *Triturus* study area today. 1515-1715 hours. 1545 hrs. air 18.0°C, water 13.5°C. Stream still running slowly, clear. 11 *Triturus* captured and marked, all new captures. #107-#117. Most of these concentrated about two sections of rotten log at edge of stream. Several others on steep bank of stream either hiding under or just emerged from under leaves and other debris. Weather overcast, soil wet.

11 Nov. Calif.: Contra Costa Co., Lafayette Reservoir. Visited only this *Triturus* study area today. 1500-1615 hours. 1500 hrs. air and water 18.5°C. A few adult *Triturus* noted in water along face of dam. Tail fins were not evident, dorsal color dark. Under test board at shore of lake no metamorphosed *Triturus* although one noted under dead cattails in vicinity. 4 young *Triturus* captured and marked in area, #33-#36. Two *Gerrhonotus multi-carinatus* taken under boards also. Weather clear, cool.

12 Nov. Calif.: Marin Co., Samuel P. Taylor State Park. No *Triturus* in stream (Lagunitas Creek?) though several deep pools examined. Soil wet, water clear with slow flow. Is it too cold or too early in season?

W. Riemer
1950

Journal

18 Nov. Calif.: Contra Costa Co. Visited both *Triturus* study areas today. 0945-1045 hrs at Lafayette Reservoir. 0945 hrs, air and water 16.0° C. Heavy rain during entire week past. Rain during visit. 1 *Batrachoseps* and 1 very small *Ensatina* (first ever seen in area) noted but no *Triturus* under test board nor under any other cover. Two adult ♂♂ short distance from shore. In partial breeding condition. Because of rain could not see if adults still in water. 1200-1245 at Pinehurst. Temperature at station at 1315 hrs. 60° F. 6.3 in. of rain since last week. Heavy rain falling. Stream at flood stage. Rapid and muddy. Current to strong to stand up against and more than hip boot deep in shallowest part of area. No *Triturus*.

19 Nov. Calif.: Solano Co., Vallejo On report of Robert Rudd of M.V.Z. that last weekend *Triturus* and *Rana aurora* abundant below dam of Lake Chabot a visit made there today. Because of heavy rains everything mushy. Three *Triturus torosus* taken under debris, several *Batrachoseps*, *Bufo boreas* (about one cm.), *Hyla*, two *Thamnophis elegans aquaticus*, one *Gerrhonotus multicarinatus*.

W. Riemer
1950

Journal

25 Nov. Calif.: Contra Costa Co. Visited both *Triturus* study areas today. 1115-1230 hrs. at Lafayette Reservoir. 1145 hrs air 14 °C, water 15.5 °C. Adults seen in water on dam face. Tail fin well developed and dorsum (at least anteriorly) very pale. Not abundant. Apparently only males. Under boards marked three new animals # 38-40. Low overcast. At Pinehurst 1315-1415 hrs. 1345 hrs. air 15.0 °C, water 12.3 °C Stream clear and flowing normally. No *Triturus*. Noted 4 *Ensatina*, *Batrachoseps* common.

2 Dec. Raining heavily entire day. Did not check either *Triturus* study area.

9 Dec. Visited both *Triturus* study areas. Pinehurst 1015-1045 hrs. Single adult ♀ seen outside of area in temporary pool within circlet of redwoods. Stream high, swollen, muddy. Lafayette Reservoir 1115-1200 hrs. Water in lake high and murky. No *Triturus* seen in water though undoubtedly present. Two adults on land under boards, a rough skinned ♀, and a smooth skinned ♂, (# 41+42). One noticed when surfacing for air in pool above area.

W. Riemer
1950
1951

Journal

<u>16 Dec.</u> <u>Calif.: Contra Costa Co.</u> Visited both *Triturus* study areas today. Lafayette Reservoir 1030-1115 hrs. 1100 hrs. air 15°C, water 14°C. Water extremely high. Several pair amplexing in cattail area by "lake level" guage. None on land. Soil completely saturated. At Pinehurst 1145-1215 hrs. Stream still high and murky. Soil saturated. Several DOR's. Marked one juvenile #118.

<u>20 Dec.</u> <u>Calif.: Lake Co.</u> One day drive to Clear Lake and back for purpose of seeing property near Clear Lake Park. About four hours drive to Lakeport via State Highway 29 from Berkeley. Captured one *Triturus* on return trip. No time for additional collecting.

<u>6 Jan.</u> <u>Calif. Contra Costa Co.</u> Visited only Lafayette study area. *Triturus* in water and amplexing.

<u>13 Jan.</u> Visited Pinehurst only. Stream still high but clear. No *Triturus* seen.

<u>10 Feb.</u> Visited both *Triturus* study areas. Pinehurst 1030-1215 hrs. 1115 air 13.0, water 11.0. Stream flowing strongly but at normal level. Water ~~murky~~ in deeper holes. Five *Triturus* marked, one a recapture from 1949, (#10). Just before leaving light rain began, almost immediately many young and a few

W. Riemer
1951

Journal

10 Feb. Calif.: Contra Costa Co. adults noticed walking about on surface, especially in area, partially swept clean, overlying drain pipes above area. Are animals lying in hiding under litter on ground ready to emerge at darkness or time of rain? At Lafayette 1245–1335, Wind and very murky water prevented seeing any *Triturus* on dam face. One seen in pool above lake. Two plump ♀♀ taken, one under board near water, the other half way up grassy slope walking in open. Examined deep concrete lined pit below ~~a~~ dam. Contained 10 adult *Triturus*, 1 large and 1 small *Rana aurora*, 1 large *Hyla*. All apparently trapped and unable to get out. Removed all. Check next week may indicate rate at which they get trapped. At Tilden Regional Park inspected stream in region of tennis courts. Two adult ♂♂ *Triturus* taken but stream appears as yet to be to fast and muddy.

17 Feb. Visited both study areas today. At Pinehurst 1015–1215 hrs. 1145 hrs both water and air 10° C. Stream still high and rapid but fairly clear. Adult ♂♂ with well-developed breeding pigment areas in stream. Saw no ♀♀ in stream (#123-127). At Lafayette 1245–1600 hrs. 10 adult *Triturus*

W. Riemer
1951

Journal

17 Feb. Calif.: Contra Costa Co. in concrete lined pits from which 10 taken last week. Walked along west side of lake examining shoreline and boards where they seemed suitable for Triturus to be. Objective: to gather a number for experimental fertilization techniques. Five adults taken from water and 25 from land either under boards when sun out or walking on surface after rains started. One juvenile with smooth skin and gill stubs taken under board; weak; some glandular imbalance so that metamorphosed only now?

24 Feb. Visited Pinehurst Triturus study area 1045-1145 hrs. Cold, clear, sunny. 1115 hrs., air 8.2°C, H_2O 7.2°C. Stream clear, with moderate current. No salamander tracks in mud. No Triturus seen in area.

3 Mar. Visited Pinehurst study area 1130-1200 hrs. 1145 hrs, air 8.5°C, H_2O 6.5°C. Stream clear, current mild. Weather cold, sunny, clear. No Triturus seen. Is it too cold? In stream about one mile toward Orinda from Moraga found no animals; water 7°C.

4 Mar. Calif.: Napa Co.; Sonoma Co. Left Berkeley 0830 hrs for several localities in these counties with the objective of collecting and seeing habitat of Aneides flavipunctatus

W. Riemer
1951

Journal

4 Mar. Calif.: Napa and Sonoma Co. and Triturus rivularis and granulosus. Two hrs drive to Calistoga. First stop at Rob't Louis Stevenson's Home at the summit of pass between Calistoga and Middletown. Hoped to find A. flavipunctatus here. Found Batrachoseps and one small Ensatina only. Snow in patches still on ground. Raining. Presumably too cold for amphibians in general. Can Batrachoseps tolerate lower temperatures than the others? The place is a group of abandoned buildings mostly in bad decay. Salamander habitat in form of debris and rocks, logs, etc. abundant. Probably a good spot when warmer. Air temp. 6° C. Returned to Calistoga, then drove to Skaggs Springs in north-central Sonoma Co. Here hoped to find T. rivularis and granulosus as well as A. flavipunctatus. Nice series of Aneides flavipunctatus taken from under rocks and burnt fence posts lying on ground. Aneides lugubris, mostly young, taken chiefly under bark of logs. T. rivularis taken on road and near stream (see that species account). Also taken here were Sceloporus occidentalis, under bark, Diadophis amabilis and

W. Riemer
1951

Journal

4 Mar. Calif.: Napa and Sonoma cos. Eumeces skiltonianus under rocks at edge of road. Not raining for short period while at this locality but apparently most of rest of day. (See T. rivularis for more detailed account of this locality). Drove on toward Stewarts Point on coast in expectation of collecting also at Cazadero. Only a couple of miles from the coast road blocked by fallen tree so returned home via Healdsburg, Santa Rosa, Petaluma and Vallejo. Road west of Skaggs Springs not difficult except where rains have caused slides. Near summit (1900 ft.) blanket of snow over much of ground, perhaps 4-6 inches. Douglas fir and redwood timber at top, lower slopes with oak and grass; much grazed by sheep. Considerable lumbering activity. Many cascading tributary streams. All main streams muddy. On road parallelling Dry Cr. between Skaggs Springs and Healdsburg picked up one DOR T. granulosus. Flat floodplain terrain, orchards. Is region near Skaggs Springs to mountainous? Bufo boreas also along this road. Common in numbers but all appeared but half grown. Present in party were myself, D. Zweifel, K. Murray.

W. Riemer
1951

Journal

17 Mar. Calif.: Contra Costa Co. Spent the hrs. 0835–1320 at Lafayette Reservoir. Objective: to determine what the Triturus were doing in regard to breeding activity. In certain areas Triturus abundant. (See T. torosus account for this date). Walked along western side of lake almost to far end i.e. end fartherest from dam. Picked up 4 Rana aurora, about 12 Hyla regilla. In addition saw Rana catesbiana and 1 Sceloporus occidentalis. In shallow, 3-4 inch, pools in flat grassy areas above the reservoir found Hyla(?) tadpoles well along in development. Other small black larvae also present. Much silky green algae. Dense population of crustaceans and other small water animals here. Frogs, probably aurora, abundant on wet grassy margins of pools. Also in same pool saw cluster of larvae in jelly mass the size and shape of a T. torosus egg mass. Larvae elongated, pale tannish-gray, no eyes yet visible. Could be Hyla? Egg cluster attached to algae in 3 in. of water. Many eggs decomposed. In main portion of reservoir in quiet water near shore two other clusters noted attached to small twig and grass stalk. One of these clusters elongate and with about 100 larvae.

W. Reimer
1951

Journal

17 Mar. Calif.: Contra Costa Co. On grassy slopes on west side of lake rodent trails and burrows extremely abundant. Thought weather suitable saw no snakes. Is this perhaps why so many rodents. Is grass too dense for snakes.
At Pinehurst *Triturus* area 1350 to 1515 hrs. Warm, sunny, clear. Stream flow moderate, clear. Two ♂♂ recorded, # 128 and # 9 a recapture. Water temp. 11°C, air temp. 16.5°C at 1500 hrs. Yellow violas now blooming.

18 Mar. Calif.: San Mateo Co. Party of myself and wife, Chas. Hanson, Joe Klotz and Rich. Zweifel drove down San Francisco peninsula on State Hwy 5 (Skyline Blvd.), turning off to La Honda, Pescadero, San Gregorio, La Honda and return by Hwy 5. Objective: to establish positively the presence of *Triturus granulosus* in the pools adjacent to Hwy 5 just opposite the San Francisco Co. Prison road intersection. *Granulosus* is present in these pools, (see species account this date). Also about these pools several *Thamnophis sirtalis multilineatus* were taken and one *Coluber constrictor*. Large Batrachoseps were common.

Near La Honda (1 mi. N, ½ mi. E) stopped

W. Riemer
1951

Journal

18 Mar. Calif.: San Mateo Co. to look for Rana boylii and Triturus. Single T. torosus taken in rotten log, no Rana. Batrachoseps common. Redwood, Douglas fir forest; stream rapid, wide, muddy — apparently from slides which were numerous and road repairs.

24 Mar. Calif.: Contra Costa Co. Visited both Triturus study areas. At Lafayette 1030-1045 hrs. At 1040, ~~water~~ air 18.0°C, water 16.0°C on face of dam. Many animals still in water. One pair in amplexus. A few examined closely had many dark-tipped tubercles. At Pinehurst 1330-1340 hrs. At 1330, air 18°C, water 11½°C. Eight animals newly marked, three recaptures. Only two ♀♀ seen were in process of laying eggs. One set 5½ cm. below surface in quiet flow.

31 Mar. Visited both Triturus study areas today. At Lafayette 0900-1045 hrs. At 0945 on face of dam air 14.5°C, water 16.0°C; in cove NW of dam in deep water temperature 15.0°C. At Pinehurst 1130-1430 hrs. At 1400 hrs air 15½°C, water 10½°C. Eight marked Triturus handled in this area. (See species account this date for details).

7 Apr. Visited both Triturus study areas today. At Lafayette 0830-0900; Pinehurst 0930-1145. Five animals handled at Pinehurst. (See Species Account)

W. Riemer
1951

Journal

14 Apr. Calif.: Contra Costa Co. Visited both *Triturus* study areas. At Lafayette 0930-1000; Pinehurst 1030-1330. Weather cold, windy, overcast. (See *Triturus torosus* account).

15 Apr. Went to Marsh Creek area for purpose of collecting some plants and to see if *Triturus* occurs in that region. First stopped at 1 3/4 mi. E, 1/2 mi. N Mt. Diablo, Marsh Creek Springs Park. Stream here about 10 feet wide, flowing rapidly in some places with deep quiet pools also present. No *Triturus* seen in more than an hours search. *Rana aurora* and *R. boylii* common, *Thamnophis elegans atratus* (2 individuals) only snakes seen. *Sceloporus occidentalis* common. Several miles down stream where stream consists mostly of deep quiet pools a second search made. No *Triturus*. *R. aurora* and *Hyla regilla* common. This spot is same as that searched last year for *Triturus* (Feb. 1950)

21 Apr. Visited both *Triturus* study areas. At Lafayette 0850-1000; at Pinehurst 1030-1230. Weather cold, windy, overcast until 1030 when wind died down and sun appeared. (See *T. torosus* account).

W. Reimer
1951

Journal

28 Apr. Calif.: Contra Costa Co. Visited both *Triturus* study areas. At Lafayette 0930-1100 hrs. At Pinehurst 1115-1130 hrs. Heavy rain during previous night. Soil wet. Stream swollen. This is first rain since early in year (about 3 months).

5 May Visited both Triturus study areas. At Lafayette 0945-1045 hrs. At Pinehurst 1115-1200. Light rains during past week. Soil wet.

6 May Calif.: Marin Co. Briefly examined dam face and vicinity at both Phoenix Lake near Ross and Alpine Lake. Water of both reservoirs murky and impossible to see to depth of more than 6 inches. No Triturus. Both reservoirs easily accessible and both with roads parallelling shore. Dam at Phoenix Lake of rock and therefore unsuitable for capturing *Triturus*. Alpine Lake Dam vertical. Shore line very steep near dam.

19 May Calif.: Contra Costa Co. Visited both *Triturus* study areas today. At Lafayette 0900-1030 hrs. At Pinehurst 1100-1130 hrs.

20 May. Calif.: Sonoma and Mendocino cos. Zweifel, Rosenthal and I collect at 4 localities in these two counties during a one day trip. Objectives: to see areas

W. Riemer
1951

Journal

20 May Calif.: Sonoma and Mendocino cos. where species of *Triturus* exist sympatrically and to collect *Aneides* for C. Lowe. First stop at Skaggs Springs in Sonoma Co. Stream clear, moderate current, 50 ft. wide with occasional deep, 6 ft(?), pools. Earlier in year found nothing but *T. rivularis*. This time only *T. granulosus*. Zweifel took *Rana boylii* and eggs and one *Aneides flavipunctatus*. Soil, except under very large logs completely dry. Grasses partially dried. Next stop at Robinson Creek, 4 mi. SW Ukiah, in Mendocino Co. Stream small with many rocks and rapids in places. *T. granulosus*, *T. rivularis* larvae, *Rana boylii* and *Diadophis amabilis* captured. Diadophis under log on wet sand at edge of tiny rivulet in dense, soft chaparral. 3rd stop at 8 mi. WSW Willets (12.5 mi. by rd.) in Mendocino Co. High above canyon bottom. Douglas fir and chaparral. One *T. granulosus* in spring seep, *Ensatina* and *Batrachoseps* under logs and one large *Aneides ferreus* under bark of large pine stump. Several small ones under bark of fallen log and under board on wet soil. Last stop 6 mi. WSW Willets (9.0 mi. by rd.). Many stumps and downed

W. Riemer
1951

Journal

20 May Calif.: Sonoma and Mendocino cos sections of logs. Hoped to find more Aneides. Took only Ensatina adult and several young under logs. One Thamnophis elegans on road. Returned then to Berkeley.

26 May Calif.: Contra Costa Co. Visited Pinehurst study area only for purpose of checking on hatching time of larvae of Triturus. 1315 -1400 hrs. Weather hot and humid. Two large R. aurora in area. First seen there this season. Also tailless Ensatina adult walking in open near stream. When placed in water it could not swim at all. Apparently they rely on tail largely for locomotion.

27 May Calif.: Santa Cruz Co., San Lorenzo River, Boulder Creek (town) While collecting grasses at edge of stream a large R. boylii frightened into stream. Easily captured. No Triturus seen. Stream deep, 6-8 ft. and often swift.

9 June Calif.: Contra Costa Co. Visited both Triturus study areas. At Lafayette 1030-1130 hrs. Group of larvae collected. At Pinehurst 1145-1245 hrs. Eggs now hatching. Weather clear, warm. Grasses dry, most of flowers gone.

W. Riemer
1951

Journal

4 Aug. Calif.: Contra Costa Co. At ~~Lafayg~~ Lafayette Reservoir to check Triturus 0830 – 0945 hrs. No adults, no metamorphosed young. At Pinehurst 1015–1115 hrs. Many larvae. Stream still flowing.

12 Aug. Calif.: Marin Co. Made trip to Marin Co. ~~while~~ hoping to find Triturus larvae or post-larval young; at least to determine stage of development attained thus far. Went first to locality where Zweifel had captured several Triturus last May i.e. 1½ mi. SSE Alpine Lake Dam, Cataract Canyon. No Triturus seen though stream still with numerous deep pools though no flow. Dicamptodon larvae taken. Rana boylii adults taken. Both common. Also checked stream 4 mi. S, 1 mi. E Mt. Tamalpais (West Peak), in Frank Valley. Ideal appearing but no Triturus in any form present. R. boylii present. Probably 3-4 hrs spent searching for larvae. No reason why larvae not present has yet occurred to me.

17 Aug. Calif.: Contra Costa Co. Check of Triturus study area at Lafayette made to determine developmental stage at which Triturus torosus now are. (See that account). In area 1530 – 1545 hrs.
~~1330 – 1345~~.

W. Riemer
1951

Journal

1 mi. W, ½ mi. N

18 Aug. Calif.: Sonoma Co., Skaggs Springs, Warm Springs Cr.

Trip over week end. Present were myself, Keith Murray, Cynthia Wood, Rob't. Stuart. Objective: to determine developmental stage at which Triturus species are at at this time of year. Also to see north coast. Left Berkeley 0800 hrs. 1st stop near Skaggs Springs at 1100 hrs. From 1100 - 1430 hrs. all collected. Taken in main stream were Triturus granulosus adults, T. rivularis larvae and post-larval young, Rana boylii larvae, metamorphosing young, post-larval young, and adults, Clemmys marmorata, Thamnophis elegans and sirtalis. All associated with floating algal mats except adult granulosus. In small tributary rivulet subadult granulosus, larval and post-larval Dicamptodon ensatus collected as well as Rana boylii. Also seen but not collected were Sceloporus young, Cnemidophorus, Gerrhonotus coeruleus DOR, and small Lampropeltis getulus DOR.

18 Aug. Calif.: Mendocino Co., Robinson Creek, 4 mi. S, 1 mi. W Ukiah

Continuing trip above, arrived here at 1715 and caught Triturus rivularis larvae until 1815 hrs. (See that account). Rana boylii common but not as abundant as

W. Riemer
1951

Journal

18 Aug. Calif.: Mendocino Co., Robinson Creek, 4 mi. S, 1 mi. W Ukiah
~~at~~ Skaggs Springs. *Rana* metamorphosing. *Thamnophis elegans* and *sirtalis*, young *Sceloporus* also seen. Spent 1715–1815 hrs in area. 1745 hrs. air 33°C, water 25°C. Stream flowing with numerous deep – 2 feet – pools. As large as stream at Skaggs Springs.

19 Aug. Calif.: Mendocino Co., Russian Gulch State Park,
Started from camp site on James Creek, a tributary of north fork of Big River, on road from Willets to Fort Bragg at 0930 hrs. No collecting done at this spot except that Stuart found one *Triturus granulosus* adult in stream. Stopped at State Park to look for *Ascaphus truei* and *Triturus*. Bill Salt, formerly of M.V.Z. had collected *Ascaphus* here earlier in summer. This is southernmost record. 1030 – 1130 spent looking for aquatic forms. None found. Also nothing found in damp logs or under bark. One *Batrachoseps* found under rock at edge of rivulet. Beautiful park and ideal-looking stream. Vegetation dense, many broad leaves mixed with *Sequoia*.

19 Aug. Calif.: Mendocino Co., Van Damme State Park, 2 mi S, 2½ mi E Mendocino
Short stop of half hour made at end of road in canyon in which park situated. Stream

W. Riemer
1951

Journal

19 Aug. Calif.: Mendocino Co., Van Damme State Park, 2 mi S, 2½ mi E Mendocino
with considerable areas of rapids and cascades. Examined only quieter portions and found only Dicamptodon as larvae and post-larvae abundant. Larvae in all sizes. Rana aurora common in weeds and grass along edges. Stuart found one subadult Triturus granulosus under rock near stream. This is a beautiful park and exciting looking stream.

19 Aug. Calif.: Sonoma Co., Austin Creek, 1¼ mi. S Cazadero
Drove south on Calif. #1 and turned off at Fort Ross for Cazadero. Stream not accessible until that town. Search of stream – quiet, broad, shallow with occasional deep pools – at this locality revealed only one small R. boylii. Crawfish abundant. Is this season Triturus and Rana not present? Would they be present in small side streams? Returned to Berkeley via Petaluma and Vallejo arriving at 2130 hrs.

1 Sept. Calif.: Tuolumne and Calaveras cos. Wife, child, and I drove to area of Sonora with objective of: ① determining developmental stage of Triturus larvae in Sierras and

W. Rainer
1951

Journal

1 Sept. Calif.: Tuolumne and Calaveras cos. (2.) to located ~~an~~ area with a population of a size such that large samples could be collected at the proper time. Left Albany at 0900 hrs arrived at Sonora about 1330 hrs. First checked Woods Creek at Sawmill Flat a few miles SE of Columbia. Stream bed dry. Triturus taken here in spring by Wm Clarke. Continued on to Vallecito stopping to check Stanislaus River at Parrott's (~~spelling~~?) Ferry. Shore with complete lack of vegetation, extensive rock and sand beaches, many small fish. Did not appear favorable for Triturus. Next checked Angels Creek about 1 mi. upstream from Angels Camp. Streambed largely choked with ripening blackberries but in open pools large (6 inch) fish present ~~and~~ ~~to~~ Rana catesbeiana tadpoles and adults present. No Triturus. Returned to Sonora via Tuttletown checking Stanislaus River again. River with even wider barren sand banks and no quiet shore waters. Also checked small stream near Tuttletown but no Triturus found. Plenty of deep and quiet pools, submerged and floating vegetation. Camped for night ENE Phoenix Lake.

W. Riemer
1951

Journal

2 Sept — Calif.: Tuolumne Co. Next morning checked Phoenix Lake, a shallow, muddy shored pond for *Triturus*. Did not appear favorable. Fish and *R. catesbeiana* abundant. Drove next to Twain Harte and checked lake there (3600 feet). Local resident claimed area too high. Lake swarming with fish; a resort lake. Returning to Sonora checked Curtis Creek about one half mile down stream from Soulsbyville. Appeared to be an excellent spot for *Triturus*. Stream small with many deep pools, shallow mud and sand banks, rock bottoms, algal mats. Well shaded and sunny areas. *Rana boylii* abundant, larvae and post-larval forms present. Hyla young present. Many mouldy metamorphosing *boylii* dead. Collected only a single *Clemmys marmorata*, being saved as pet. Temperature of air at 1100 hrs. 22° C, water 17° C. Knowing that Clarke had said that pools were present thruout year in Woods Creek at Sawmill Flat we then returned to that area. Found both his home and him when investigating a dense green stand of trees along stream course. In one small pool

W. Riemer
1951

Journal

2 Sept. Calif: Tuolumne Co. which he pointed out we collected three larval *Triturus*, almost of a size for metamorphosing. All found by turning over rocks in bottom of pool. Pool 6 x 2 feet and at deepest 18 inches. Cold, no temperature recorded. Perhaps *Triturus* also present at Curtis Creek mentioned above if similar niche examined. For large numbers of adults in the spring Clarke suggested going to Italian Bar near Columbia or to region of Berkeley Recreation Camp, Harden Flat on State Hwy 120 near western boundary of Yosemite. Exact locality of larvae collected above is Woods Creek, 1½ mi SE Columbia. The total lengths of the three animals: 43, 46, 47 mm.

9 Sept. Calif: Marin Co. Trip made Marin to try to find state of development of *Triturus granulosus* and locate site where ~~a~~ large series might be collected when wanted. With wife + child drove via Vallejo, Novato, Point Reyes Station, Olema, Lagunitas, San Anselmo, San Francisco and home. Several miles west of Novato noted construction of a new dam site. This may be interesting to watch in the future to watch *Triturus* population, if any, grow. At present entire area between

Journal

W. Riemer
1951

9 Sept. Calif.: Marin Co. Novato and point ~~area~~ where the Arroyo Nicasio enters [Paper Mill Creek] Lagunitas Creek is extremely arid and mostly overgrazed grassland. ~~At the~~ point where the road from Nicasio joins the one between Point Reyes Station and Petaluma there were a few large but isolated pools still present. Fish were extremely abundant, R. boylii young present. No Triturus with a short examination. That this region is quite wet at other times of year is attested to by the mosses growing on the stake fences. Triturus granulosus larvae and adults collected in Paper Mill Creek in Samuel P. Taylor State Park. See that species for details. The weather today was clear and extremely hot.

15 Sept. Calif.: Contra Costa Co. Visited both Triturus study areas. 0900-1015 hrs at Lafayette. See T. torosus. Baby Hyla only recently metamorphosed in tremendous numbers near water. So thick many must have been crushed underfoot. They are everywhere. Small Rana aurora (about 1 inch) common. Young Sceloporus - probably recently hatched also about. At Pinehurst 1045-1145 hrs. See T. torosus Weather hot, sunny, hazy.

W. Riemer
1951

Journal

14 Oct. Calif.: Contra Costa Co. Visited only the Pinehurst *Triturus* study area. 0830-0845 hrs. Clear, warm, sunny.

20 Oct. Calif.: Napa Co. Party of Bill Woodin, Richard Zweifel and myself visited certain spots in Napa and Sonoma Co. Objectives were to collect *Rana boylii* and *Aneides flavipunctatus* for Zweifel, *Triturus* for me. Left Berkeley 0715 hrs., Woodin providing transportation. Arrived at Calistoga 0915 hrs. First stop made at Robert Louis Stevenson Home (now a State Monument) 2 mi. E, 1 mi S Mt. St. Helena. Here, because of recent rains soil under exposed small litter damp but in sheltered areas and under larger pieces of litter soil dry. Apparently the rains here have been light so far. Also, about 1/8 mi. up the canyon directly above the house we found the ~~Silverado~~ Silverado Mine ("abandoned" on the topographic sheets) now with a locked and blocked entrance. Because of seepage in mine area and from collecting tanks just below the mine there were areas of saturated soil present. From vicinity of mine and buildings down canyon the party collected 4 young *Ensatina*, 1 *Aneides*

W. Riemer
1951

Journal

20 Oct. Calif.: Napa Co. lugubris, 3 Aneides flavipunctatus, and several Batrachoseps. Then we drove to a spot which alledgedly had many Triturus in some ponds just one week ago. This information from Dr. Camp and Mrs. Mary Major. A good road leads from the highway just below the Lake-Napa line to the home of Robert Livermore - "Montesol" - located 3½ mi. E, ½ mi. S Mt. St. Helena. Here the party collected in several artificial pools 29 Triturus granulosus and 1 Rana boylii. In the vicinity Jureifel picked up 1 Sceloporus occidentalis. He claims he saw some S. graciosus also. On a dirt road, impressed in the dried mud were a series of tracks which all agreed were those of a bear. I was unaware that bears occurred in the coast ranges. The apple orchards and grape arbors of the Livermore place would no doubt please the bear. The general region is one of young dense conifer forest with little understory. We returned to the highway at which place the road crosses a small stream. Here one Rana boylii secured. Locality:

W. Riemer
1951

Journal

<u>20 Oct. Calif.: Napa Co.</u> 2½ mi. E Mt. St. Helena.
<u>20 Oct. Calif.: Sonoma Co.</u> From above spot we drove directly to vicinity of Skaggs Springs stopping along the way to record only two snakes at the following localities: <u>Thamnophis sirtalis</u> (brilliant red head) DOR — 4 mi. W, ½ mi N Geyserville, and <u>Thamnophis elegans aquaticus</u> DOR — ½ mi. E, ½ mi. N Skaggs Springs. A short distance beyond Skaggs Springs — ½ mi. W, ¼ mi. N we made short stop for collecting <u>Aneides</u>. Found 1 <u>Aneides lugubris</u>, 1 <u>A. flavipunctatus</u>, 1 <u>Rana boylii</u>. Ground on hillsides very dry yet, although some evidence of rain. Stream clear, still flowing with considerable algae. Blackberries along bank ripe. No sign of <u>Triturus</u>, no sign of <u>Cnemidophorus</u> either probably because of cool weather. Next stop made to collect in what appeared to be a burned area. Actually trees had simple been girdled. Much litter on ground but soil not very moist. Spent only short time looking under bark, etc. Only found 1 <u>Sceloporus occidentalis</u>, 2 <u>Eumeces skiltonianus</u>, several <u>Batrachoseps</u>. This locality 5½ mi. W, 1 mi. S Skaggs Springs. Another stop made 4½ mi. S, 2½ mi. E Annapolis. Here in

Journal

W. Riemer
1951

20 Oct. Calif.: Sonoma Co. dense redwood forest near bottom of small, now non-flowing side stream. ~~two~~ a subadult *Dicamptodon* taken under log. Larvae of *Dicamptodon* in stream pool. Trip completed by driving on to Stewart's Point and then south to Russian River on Calif. Hwy # 1.

10 Nov. Calif.: Contra Costa Co. Visited both *Triturus* study areas. At Lafayette 0940 - 1005 hrs. At Pinehurst 1030 - 1050 hrs. Weather clear, cool, sunny. Waterfowl common now at Lafayette, redwings in cattails.

8 Dec. Visited both *Triturus* study areas. At Lafayette 0930 hrs to 1015 hrs. Pinehurst 1045 - 1115 hrs. Weather cold, clear, high clouds. Waterfowl not common at Lafayette. No redwings, cattails beaten down by wind & rain.

29 Dec Visited only Lafayette area from 1700 to 1730 hrs. *Triturus* scarce. Soil saturated. ~~Resevoir~~ Reservoir level up about two feet.

W. Riemer
1952

Journal

19 Jan. Calif.: Contra Costa Co. Visited Lafayette *Triturus* study area from 0830-0900. No *Triturus* active. Few found under boards. Weather overcast cold.

31 Jan. See journal of 8 March 1952.

2 Feb. Visited Lafayette study area 0900-0945. Few *Triturus* seen, one pair in amplexus. Weather; cool, sunny, clear following rains yesterday.

3 Feb. Calif.: Alameda Co., Berkeley to Humboldt Co.
R.C. Stebbins and I in my truck left M.V.Z. 0735 hrs. (10302 mi on odometer). Objective of trip to collect variety of amphibians for Zool. 137 course for Stebbins, to collect geographic series of *Triturus* for comparative purposes for me. Stops made at Robinson Creek near Ukiah where collected *Batrachoseps*, *Aneides lugubris* and *flavipunctatus*, *Triturus rivularis*; 9.4 mi. SSE Willits where collected *Aneides lugubris*, *Triturus granulosus*, *Ensatina*, *R. boylii*, *Sceloporus occidentalis*, *Batrachoseps*; 3.1 mi. S Laytonville where collected *Ensatina*, *Aneides lugubris*, *Hyla* calling at dusk, *Sceloporus*. Weather all day overcast but bright, neither cold nor warm. Camp for night just N of Garberville city limits.

4 Feb. Calif.: Humboldt and Del Norte cos.
No record of days collecting sites kept but camped for night near Mill Creek State Park,

W. Riemer
1952

Journal

4 Feb. Calif.: Humboldt and Del Norte cos.

near Crescent City. No success with Triturus at all. Did collect large numbers of A. flavipunctatus, some Ensatina, Batrachoseps, A. lugubris, and a few P. elongatus, one Rana boylii. At end of day ran odometer at 10700.5 mi.

5 Feb. Oregon: Curry and Coos cos.

After leaving our Mill Creek Park camp site stopped in cleared area on short cut road to Fort Dick. Here collected large numbers of P. elongatus, and A. ferreus, Ensatina, Batrachoseps, Hyla. Following 101 north got first Triturus again shortly after entering Oregon. Camped for night near Coquille. At end of day odometer reading 10839.6.

6 Feb. Oregon: Coos and Douglas cos

Collected along 101 between Coquille and Reedsport and inland along State Hwy 38 almost to Scottsburg. Camp for night near Douglas-Coos Co. line S of Reedsport. Odometer reading 10949.7 at end of day. Collected during day a few T. granulosus, Rhyacotriton, P. vehiculum, and Stebbins got good series of P. dunni and some Dicamptodon larvae. Weather cool, sunny with broken overcast.

7 Feb. Oregon: Douglas Co to Calif.: Del Norte Co.

Concentrating largely on Triturus drove and collected S to Crescent City where camped for the night. Odometer reading at end of day 11138.2 mi. Large series of Triturus collected. Shallow pools

W. Riemer
1952

Journal

7 Feb. Oregon: Douglas Co., to Calif.: Del Norte Co.

appear to yield little or nothing. Triturus appear to select deep, permanent pools.

8 Feb. Calif.: Del Norte Co. to Alameda Co.

Returned home by 2300 hrs. stopping to collect at a few places in north coast counties only.

13 Feb. Calif.: Santa Clara and San Mateo cos.

With Zweifel, Rosenthal drove in Zweifel's car to Stanford to see Savage. In mid-morning collected near Searsville Lake for a few minutes capturing Diadophis and Triturus torosus. With company of Savage and Cliff in afternoon collected on Woodside - La Honda road just NE of State Hwy 5, and also in San Mateo Co. Memorial Park. In both places T. torosus, Aneides flavipunctatus, A. lugubris and Ensatina were taken. On returning home Zweifel and I collected Batrachoseps and T. granulosus and juvenile Thamnophis e. atratus on State Hwy 5 at pools opposite Sharp Park. Objectives: To collect granulosus from Santa Cruz Mts for me and lugubris for Rosenthal.

23 Feb. Calif.: Contra Costa Co.

Visited both Triturus study areas in morning to determine stage of activity. See T. torosus for results. At Lafayette 0945 - 1100 hrs and Pinehurst 1115 - 1145 hrs. Weather completely overcast with light drizzle at Lafayette.

W. Riemer
1952

Journal

23 Feb. Calif.: Santa Clara Co., Stanford University

Spent 1500-1630 hrs with Dr. V.C. Twitty with object of learning technique used in hybridizing *Triturus* species. Procedure: Use animals only ~~those~~ when actively amplexing and spawning in the field. Perhaps ♂♂, but not ♀♀, store well at low temperatures of 3-4°C. Cut off head, slit belly from neck to vent, remove most of intestine. Snip out vas deferens of one male and mascerate in about 5 cc of Holtfreters solution — solution need not be sterile. Snip out oviducts, placing them on glass surface moist with Holtfreters. Free eggs by stripping or dissecting away oviduct. Place in sperm suspension for short time and remove to damp — not wet — glass bowl and cover. Add water after about 30 minutes. Pond water best. Not distilled or chlorinated tap water. Cleavage should occur within 12-18 hrs.

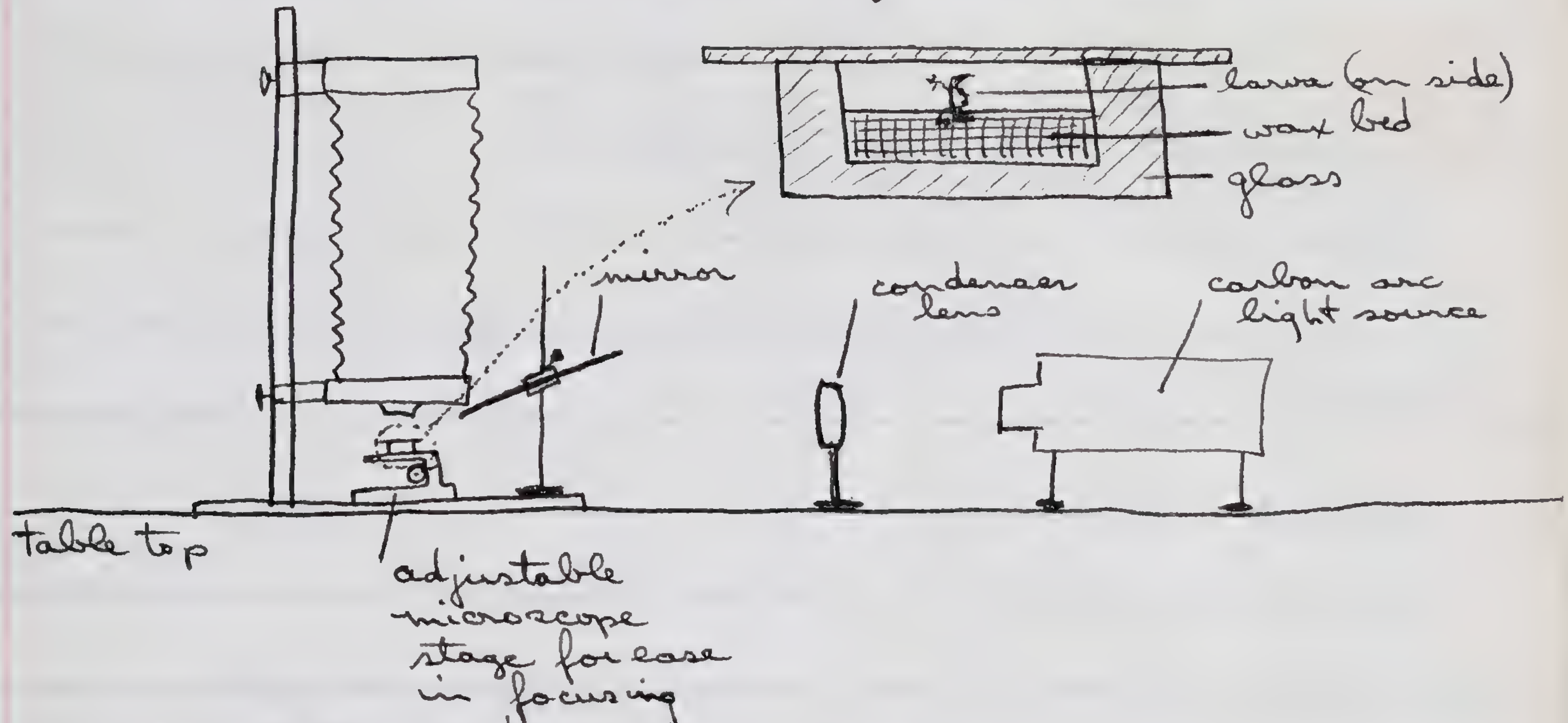
Larvae photographed by following method: Glass container (sawed of salt shaker) with beeswax layer in bottom. Wax grooved so that ~~larv~~ larva when laid in it remains in fixed position. Container over filled with water and glass plate slid across surface excluding all air bubbles. Photographed then with camera vertical. Larva previously anesthetized.

W. Riemer
1952

Journal

23 Feb. Calif.: Santa Clara Co., Stanford University

Photographic set-up as follows:



Twitty ~~recommends~~ recommends for anesthesia 0.025 part solution of "M.S. 222". Kept as stock solution at strength of 0.05 parts. Made and diluted with tap water.* "MS 222" purchased in 100 gm lots from Sandoz Chemical Works, Inc., 61 Van Dam St., New York City. Larvae immersed but adults must be injected. Adults work as well with ether-water mixture.

Saw animals Twitty calls *granulosus* collected near Stanford. Light in color like lighter colored of *torosus* from Berkeley. Not distinguishable from *torosus* from same collection site to my eyes. *Torosus* from Mt. Hamilton appear different from Berkeley ones, more reddish. Twitty thinks ♀ vent shape best *granulosus* character.

* See Journal of 14 March 1952.

W. Riemer
1952

Journal

1 Mar. Calif.: Alameda Co. to Butte Co.

1015 hrs, party of Zweifel, Keith and Cynthia Murray and myself left Berkeley in Zweifels car. Objective: for Zweifel to see specific localities near Chico and collect R. boylii, for myself to collect Triturus. Arrived in Chico at about 1445(?)hrs. One stop made at mine site where ponds present in mine debris. R. boylii captured here, Hyla eggs present both well developed and apparently newly laid. This locality in H. regilla account. Terrain between Chico and De Sabla, Magalia, Paradise, etc. appears to be a plateau (of volcanic origin?) with abundant vertical cliff faces. Streams apparently then have dissected it into many parallel flat-topped ridges. Many places with much water seepage over rocks. Hydromantes present?

2 Mar. Calif.: Butte and Yuba cos to Alameda Co.

Entire day spend in southern Butte Co. in digger pine, oak zone. Scalopous, Eumeces, Gerrhonotus, Rana, Triturus collected. Returned home after dark.

8 Mar. Oregon: Benton Co., 7 mi. N Corvallis

A series of Triturus granulosus collected ~~in~~ 31 Jan. 1952 in Arboretum Pond of Peavy Arboretum by R. A. Pimentel and subsequently sent alive

Heceta Head Light House
Devil's Elbow State Park
Sea Lions Cave
Darlingtonia State Park
Mercer
Heceta Beach
Florence
Joaquin Miller Grove
Glenada
Jessie M. Honeyman State Park
Woahink Lake
Westlake
Siltcoos Lake
Tahkenitch Lake
Minerva
Tiernan
Cushman
FOREST
Siboco
Canary
MT. POPOCATEPETL
ROMAN NOSE MTN. 2856
Ada
Sulphur Springs
Gardiner
Reedsport
Tideways State Park
Winchester Bay
Umpqua Lighthouse State Park
Rhododendron State Park
Eel Lake
ELLIOTT
DEAN MTN
STATE
SIUSLAW
NAT'L
Lakeside
Tenmile Lake
FOREST
FOR
Hauser
Simpson St Pk
Empire
North Bend
Coos Bay (Marshfield)
Charleston
Eastside
Sumner
Coaledo
Leneve
Coquille
Riverton
Norway
Arago
Myrtle Point
Greenleaf
Swisshome
Mapleton
Walton
Linslaw
Wolf Creek
Alma
Gunter
Smith River
Scottsburg
Elkton
Drain
Elk Creek Tunnel Wayside Forest
Yoncalla
Kellogg
Rice Hill
Umpqua
Golden & Silver Falls State Park
UMPQUA NATIONAL FOREST
Allegany
Millwood
Cleveland
Melrose
Lookingglass
McKinley
Dora
Sitkum
Reston
Brockway
Tenmile
Dillard
Olalla
Gravel Ford
Bridge
Alderwood State Park
Alvadore
Elmira
Noti
Veneta
McGlynn
Crow
Fern Ridge Res.
Lorane
Wooley
Siuslaw River
Eugene
Springfield
Coburg
Irving
Univ. of Oregon
Mohawk
Leaburg
Walterville
Thurston
Natron
Jasper
Fall Creek
Goshen
Trent
Pengra
Creswell
Dexter
Lowell
Winberry
PORTLAND 694 Miles SAN FRANCISCO
Walker
Saginaw
Cottage Grove
Divide
Comstock
Anlauf
Leona
Dorena
Star
Culp Cr.
Rujada
Disston
Lund Park
Kloman
Calapooya Springs
Cottage Grove Res.
London
Boswell
Blackbutte
Elkhead
Mineral
UMPQUA
Bohemia
Hawthorne
Oakland
Sutherlin
Tyee
Verno
Nonpareil
Idleyld Park
Wilbur
Oak Cr
Winchester
Glide
Peel
Roseburg
Dixonville
Nofog
Steamboat Falls
Steamboat
Circle H Lodge
NATIONAL
Toketee Falls
Big Camp Ranger Sta.
Umpqua Falls
Fish Lake
Dole Sta.
Buck Fork
Nugget
FOREST

W. Riemer
1952

Journal

8 Mar. Oregon: Benton Co., 7 mi. N Corvallis

to me. Collection data: "Time: 1025-1040. Weather: Overcast (strato-nimbus ~~clouds~~ clouds) with a slight drizzle. Water surface temp. at 3 inches: 9.7°C. Locality: Arboretum Pond # in Peavy Arboretum, ca 7 miles N of Corvallis to the W of Highway 99W in Benton Co. Remarks: Taken along pond margins. Animals were 'resting' in debris or swimming along margin. No females seen." Above data from Pimentel and also following comments. "Arboretum Pond is about 3.2 acres in surface area and 25 feet in the deepest spot." Many of animals dead on arrival because of too dense packing. Others dead after several days. In catalogue they follow 8 Feb. 1952. Pimentel also claims granulosus from ~~areas~~ encircled on facing page map are smaller than granulosus from other areas adjacent to the lakes.

8 Mar. Calif.: Contra Costa Co.

Visited both Triturus study areas. At Pinehurst 1400-1420 hrs. Lafayette 1440-1530 hrs. Weather: clear, bright, sunny, cool. Snow on Mt. Diablo.

14 Mar. M.V.Z.

Mr. Kinsey, storekeeper informs me that M.S.222 (see Journal of 23 Feb. 1952)" is a meta-amino-benzoic acid

W. Reimer
1952

Journal

14 Mar. M.V.Z.

in the form of a methanesulfonate". 100 gm packages are the smallest produced.

29 Mar. Calif.: Contra Costa Co.

Visited only Pinehurst Triturus study area. 1600-1800 hrs. 8 animals handled.

30 Mar. Calif.: Marin Co.

Family and I made trip via San Francisco following State Hwy 1 from Golden Gate to Olema and then return by Fairfax, San Raphael and San Francisco. Objective: (1) To examine pond in which Stohler in years past collected large numbers of granulosus. Pond lay between Olema and Bolinas. (2) To collect a series of Marin Co. T. granulosus. Weather cool, clear, sunny. Pool not definitely located and only two granulosus captured.

5 Apr. Calif.: Alameda Co.

Richard Zweifel and I collected along N side of Mt. Hamilton Range. Objective to collect Rana boylii and Triturus where possible and also collect generally. Examined Alameda Creek 1¼ mi. N, 2½ mi. E Niles but no Triturus. Stream large 100 feet or more, murky, sandy banks. Only one isolated side pool seen though edges of stream quiet. Then following up Calaveras Creek toward Calaveras Reservoir picked up adult rattler on road. (See catalogue).

W. Riemer
1952

Journal

5 Apr. Calif.: Alameda Co.

Just 0.5 mi. further up the road lay a DOR Thamnophis elegans atratus subadult. 0.1 mi. further a subadult Gerrhonotus multicarinatus, body temp. 24.6° C. Examined one of small brooks tributary to Calaveras Creek near rattlesnake locality but found no Triturus. One large R. boylii seen. Examined San Antonio Creek where it crosses Calaveras Dam road but no Triturus. Water clear, deep pools, quiet flow or none on rock, sand and mud bottoms, plenty of overhanging and submerged roots and other vegetation. Perhaps open nature of terrain and vegetation is not favorable for Triturus. Hyla and Rana aurora common. Drove then to Corral Hollow SE of Livermore but because of arid desert like nature of place returned to and drove up Arroyo Mocho. Juvenile rattler picked up while leaving Corral Hollow.

12 Apr. Calif.: Santa Cruz Co., Waddell Creek, 3¼ mi. E Ano Nuevo Point, 25 ft.

Party of C. Ray, R. Zweifel, H. Jordan and myself drove to this locality. Objectives: Ray and Zweifel to collect Aneides flavipunctatus, Jordan to collect lizards for Plasmodia, myself to collect Triturus. Trip, down State Hwy #1 takes 2 hours. Property of Hoover, permission quickly granted

W. Riemer
1952

Journal

12 Apr. Calif.: Santa Cruz Co., Waddell Creek, 3¼ mi. E Ano Nuevo Point, 25 ft., for trespassing. Where road first approchs stream closely beyond house large numbers of ~~toroto~~ T. torosus present as well as eggs. Further upstream animals still common but not so abundant. Same applies to eggs. In puddles near stream T. granulosus taken. None in stream however. Do granulosus breed later here or do they breed further upstream? Those taken did not appear to be in breeding condition. Aneidas flavipunctatus taken (11) in Bessie Creek. Dicamptodon larva also taken here. These taken by Ray and Zweifel. R. aurora in muddy pools above stream in vicinity of Stevens Camp. Near where Triturus abundant and at edge of meadow area under bark of dead tree Jordon took several Sceloporus, Thamnophis elegans, Contia (1 got away), Hyla, Gerrhonotus. Weather: cool to cold, overcast heavy and low. Coluber constrictor taken next to reservoir near house.

21 Apr. Calif.: Contra Costa Co., Pinehurst
Visited only this Triturus study area. 0900-1015 hrs. Only two animals handled. Weather fair, sunny, clear, comfortable. Stream still with good flow, water only slightly murky.

W. Riemer
1952

Journal

26 Apr. Calif.: Contra Costa Co. - Visited both *Triturus* study areas. At Lafayette 0840-0945 hrs. Pinehurst 1015-1045 hrs. Season appears to be over and adults leaving water.

27 Apr. Calif.: Tuolumne Co. - With Richard Johnston and family and my family drove via Hwys 50 (U.S.), State 120 and 49 to Columbia and from there to Italian Bar ~~and~~ on South Fork of Stanislaus River. Beautiful spot with rushing river, broad open grassy meadows, apple trees and grapes (abandoned) and abundant bird life. Bridge crosses river at this point. Camped here for night. Found no sign of *Triturus*. Did collect one *Scalopus* for H. Jordan.

28 Apr. Calif.: Calaveras Co.
On way home drove through Vallecito, Murphy, Altaville and State 4 to Bay Area. Collected anuran larvae and one *R. boylii* near Vallecito. Checked Coyote Creek at Vallecito, Angels Creek SE of Murphys but found ~~no~~ *Triturus*. Entire area of foothills lush green at this time. Also checked along dam at Copperopolis for *Triturus*. None found.

W. Riemer
1952

Journal

3 May Calif.: San Mateo & Santa Cruz cos.

One day trip to Santa Cruz and return with family. Objective to check suitable localities for *Triturus*. First stop a poola 2½ mi. W San Bruno, San Mateo Co. Water clear but tea colored with dark bottom. Visiblity poor in water, no Triturus seen. Examined stream 3 mi. E, ¼ mi. N Pescadero. Sand and rocky bottoms, deep pools, stream to 30 feet wide. No *Triturus*. Several areas along this stream look favorable for *Triturus* but not examined because of numerous fishermen. Continued to Santa Cruz on ~~State~~ Hwy 1. Returning home followed State Hwy 9 to Boulder Creek then Bear Creek Road toward Los Gatos. 1¾ mi. E, 1½ mi. N Boulder Creek captured one *T.* ~~torosus~~ ~~granulosus~~ torosus and collected *R. boylii* eggs. Returned home via State Hwy 17. Weather fair, sunny, warm.

24 May Calif.: Contra Costa Co.

Visited both study areas. At Lafayette 1310–1330 hrs. No *Triturus*. Lake level lower than I've ever seen it. Grass ~~to~~ beginning to dry. At Pinehurst 1400–1430, stream clear and gentle flow. No *Triturus* or larvae. 1420 hrs. air 22°C, H_2O 15°C. Weather warm, sunny and clear. Soil at Pinehurst still damp even in rather exposed roadside places.

W. Riemer
1952

Journal

30 May Calif.: vicinity Lake Almanor, Plumas Co.

Zweifel and I, driving my suburban, left Berkeley 0720 arrived at Chico 1100. Continued directly on to Butte Meadows just off State Hwy 32. Objective here as well as all other stops of trip to collect _Rana boylii_ and _Triturus_. Butte Meadows consists of extensive areas of open marshy grassy ground along tributaries of Big Butte Creek. Creek itself is now a boiling torrent. Only a single _Triturus_ taken, no _Rana_ but did take 1 _Thamnophis elegans vagrans_, an oddly black, narrow headed form as compared to those I remember from the Great Basin, snake had a trout in gut; several oddly yellow green _Gerrhonotus coeruleus_, several _Hyla_, an _Ensatina eschscholtzii platensis_. _Sceloporus graciosus_ common in very open sunny areas but apparently lacking in meadow areas and in shade of forest. Meadows in Typical transition zone with incense cedar, yellow pine, Douglas Fir all common. Spent several hours in area then drove NE 5 miles to Jonesville beyond which road closed by snow. More extensive boggy meadows with Jeffrey and lodgepole pine. Returned to Highway 32 by dirt road running W from

W. Riemer
1952

Journal

30 May Calif.: vicinity Lake Almanor, Plumas Co.
Butte Meadows. Two miles W of ~~Meadows~~ ran into more extensive meadow but ~~[illegible]~~ found nothing but *Sceloporus graciosus* which were common. Took one. Continued N on Hwy 32, then E on 36-89 and S on 89 to Big Meadows Dam of Lake Almanor. Stopped several places along this route but found no *Rana* or *Triturus*. Most of this route through typical Transition forest with occasion rises to Canadian, eg. at junction of Hwys 32 and 36-89. Camped on No. Fork Feather River at Seneca.

31 May Much of morning spent searching downstream for *Triturus* and *Rana boylii*. A dozen scattered *Triturus* taken plus one batch of newly laid eggs. No frogs seen. Several *Thamnophis elegans* taken along stream. *Sceloporus graciosus* and *occidentalis* common on same rocks along roadway. Local kid says no frogs present — water to rapid. Says also that rattle snakes abundant in pits near stamping mill of gold(?) mine upstream from bridge at Seneca. Says *Lampropeltis zonata* ~~occurs~~ in area also. On his advise went to Round Valley Reservoir to get frogs. Saw none — far to many fisherman but probably only

W. Riemer

Journal

31 May Calif.: vicinity Lake Almanor, Plumas Co.
Rana catesbeiana present. Bullfrogs also said to be abundant in Lake Almanor. In small roadside pool near Greenville collected batch of Ambystoma macrodactylum larvae. During afternoon proceeded E through Susanville and then S to region of Mc Kesick Peak where we drove over ridge to Last Chance Creek — the headwaters of Feather River. Here in arid yellow pine-sage brush meadow in large deep stream collected Rana boylii boylii. Continued S to region of Carson City for night

1 June Using Luther and Echo Pass and U.S. 50 sampled streams on W. slope of Sierras for frogs and ~~Ta~~ Triturus. No Triturus though at low elevation — the only place frogs were taken I noted old jelly capsule. Adults apparently have left stream. Clemmys marmorata taken in same stream — Webber Creek.

26 July Calif: Marin Co., 1½ mi. E San Geronimo, San Geronimo Creek, 425 feet. Entire afternoon spent in small redwood grove just E of city limits of Woodacre. Stream now consists only of scattered pools, some of considerable size and connected to one another by surface

W. Riemer
1952

Journal

26 July Calif.; Marin Co., 1½ mi. E San Geronimo, San Geronimo Creek, 425 feet
trickles or underground seeps. Surrounding soil powder dry. This is same place S.F. Cook, Jr. collected small series of T. granulosus 2 weeks ago. Now only one present. This probably means a general exodus within these two weeks. Why? In pools exposed to considerable light anuran larvae abundant. Triturus larvae also collected. See accounts of T. granulosus and R. boylii.

2 Aug. Calif: Contra Costa Co.
Visited both Triturus study areas. At Pinehurst 1130-1230 hrs. Collected series of larvae. At Lafayette Reservoir 1250-1350 hrs. No larvae could be found.

30 Aug Visited both Triturus study areas. At Lafayette 0800-0945. Collected series of adults. At Pinehurst 1015-1130. Collected series of larvae.

14 Sept. At Jewel Lake could find, but could not capture, single Triturus, presumably a granulosus. Area examined was pools below Jewel Lake Dam between 0730-0800 hrs. Water darkish colored but fairly clear.

4 Oct. Visited both Triturus study areas. At Pinehurst 1045-1140 hrs. Temperatures at 1120: air 19°C, water 13°C. Series of 10 larvae collected.

W. Riemer
1952
1953

Journal

4 Oct. Calif.: Contra Costa Co.

Stream reduced to pools with essentially no flow but surface water continuous throughout study area. Larvae still under rocks of quiet water pools and always close to water's edge. Only place where common was in well shaded, very shallow (1 inch) water with mat of bay leaves in which larvae were hidding.

At Lafayette 1200-1230 hrs. No Triturus although water on dam face calm and clear. Large numbers of frogs (catesbeiana) perched on floating water weeds close to shore. Lake level now raised above normal with result that no damp soil areas for metamorphosed Triturus to emerge onto.

8 Nov. Visited both study areas. At Lafayette 1045-1120 hrs. At Pinehurst 1135-1200 hrs.

13 Dec. Visited both study areas. Lafayette 1050-1130, Pinehurst 1150-1205 hrs.

24 Jan. Visited Lafayette Triturus study area. 1400-1545 hrs. In addition to Triturus collected saw 2 Batrachoseps and 2 Rana catesbeiana, 1 Rana aurora. Hyla calling. Weather cool with thick overcast and low gray haze.

W. Riemer
1953

Journal

1 Feb. Calif.: Napa and Yolo cos. This social-family fieldtrip was participated in by myself, my wife and children; Karlstrom and wife; Zweifel; S.F. Cook, Jr. and wife and child. Objective: to enjoy and collect in eastern Napa Co. First collecting stop: 6.5 mi NE Napa, Napa Co. Here on grassy knoll and in adjacent oak-madrone forest the party collected Batrachoseps, Ensatina (intergrade), Aneides, Sceloporus, Eumeces, Contia. The four Contia (taken from under rocks and logs) were in the forest edge area. Weather sunny, warm, clear. 2nd collecting stop: 9.3 mi. NNW Monticello, Napa Co. About 2 hrs of early afternoon spent here. Party collected Aneides, Triturus torosus, Batrachoseps, Bufo, Rana boylii, Hyla, Sceloporus, Contia. 11 Contia taken here. Oak-digger pine open forest on slopes where most of collecting done. Large valley (?) oaks in flat open areas. Well scattered. All of grass heavily grazed. Sunny, warm, clear. Large numbers of Lewis' woodpeckers in larger oaks. 3rd stop: 1½ mi. E junction of Yolo, Napa, Solano cos lines, in Yolo Co. Here Aneides, Eumeces, Triturus torosus collected during short late afternoon stop.

W. Riemer
1953

Journal

5 Feb. Calif.: Sonoma Co. S.F. Cook, Jr., Earnest Karlstrom myself and family participated in trip to Skaggs Springs area to collect Triturus and whatever else might be found. Going by way of Vallejo and Petaluma it took about 2½ hours to get to Skaggs Springs. The route continued west beyond Skaggs Springs about 4 miles west of the summit and then return by same route. Collections made at the following localities: (1) Warm Springs Creek, 1½ mi. N, 1 mi. E Skaggs Springs — a single T. rivularis on the road, an easternmost record? (2) Warm Springs Creek, ½ mi. N, 1 mi. W Skaggs Springs — 5 Aneides flavipunctatus, 4 Aneides lugubris, 1 Batrachoseps, 8 Sceloporus, 1 Gerrhonotus multicarinatus, 1 Eumeces, no Triturus. Stream clear, not swollen. Misty. At 1120 hrs. air 14° C, water 11½° C in main stream. (3) Wild Cattle Creek, ½ mi S, 4½ mi. W Skaggs Springs — 109 Triturus rivularis, 5 T. granulosus, 1 Aneides flavipunctatus, 1 Rana boylii. 1245 hrs. air 13° C, water 11½° C. See T. rivularis of this date. (4) Wolf Creek, 1 mi S, 9½ mi. W Skaggs Springs — 6 Aneides lugubris, 8 Aneides flavipunctatus, 2 Diadophis, 1 Rana boylii, 2 Sceloporus, numerous Batrachoseps and T. rivularis. See T. rivularis account for this date. All day a light mist. No snow on summit. Soil not extremely wet as if rainfall has not been great.

W. Riemer
1953

Journal

7 Feb. Calif: Contra Costa Co., Pinehurst Visited Triturus study area 1425-1545 hours.

15 Feb. Calif.: Napa Co. Objective: Collect series of Triturus granulosus in breeding condition for purpose of artificially fertilizing and rising eggs. Participating: myself and family, Richard Zweifel, S.F. Cook, Jr. and family. Route followed was directly from Berkeley to east slope of Mt. St. Helena and return. Collections were made at the following places;: (1.) 2½ mi. N, 1 mi. W Calistoga
Open grassy hillsides with open woods of madrone, digger pine, Douglas fir. Extensive rocky outcrop on adjacent knoll. Soil damp under larger rocks and logs. Clear, sunny, cool, at 1100 hrs. 6 Eumeces, 2 Gerrhonotus multicarinatus, many Sceloporus both active and under cover, 1 Diadophis, few Batrachoseps, 2 Aneides lugubris, 10 A. flavipunctatus. (2.) 3½ mi. E, ½ mi. S Mt. St. Helena. See 20 Oct. 1951 for account under Triturus granulosus. 12 of this species collected. Saw also 1 Rana boylii, Batrachoseps, 1 Ensatina. (3.) 4 mi. N, 1½ mi. W Calistoga
Here in middle to late afternoon in an area very much like that described as (1.) above we collected. 4 Diadophis, 9 Eumeces, 6 Gerrhonotus multicarinatus, 3 Aneides flavipunctatus, 5 Aneides lugubris.

W. Riemer
1953

Journal

21 Feb. Calif.: Contra Costa Co. Visited both Triturus study areas. Pinehurst 0900-0930 hrs.; Lafayette 1015-1145 hrs.

22 Feb. Calif.: San Benito Co. and Fresno cos.
Objective: To collect Triturus, Rana boylii and see nature of terrain of eastern San Benito Co. Participants on trip: myself, R. Zweifel, S.F. Cook, Jr., E. Karlstrom, and Jerry Klotz. Left Berkeley 0830, drove U.S. 50 and Calif. 33 to Dos Palos, Merced Co. and arrived at Little Panoche Creek in western corner of Fresno Co. at noon. Stream in lower parts of this ~~creek~~ valley was flowing with considerable water. Numerous deep pools. Cattails abundant, willows thick along course, water cress in open pools. Tobacco tree common. Adjacent hills ~~largely~~ open, well-grazed, with no shrubby or trees. Some slopes barren or with scattering of rocks. Uta stansburiana, Sceloporus occidentalis, Hyla regilla, millipeds; crickets abundant. Not favorable for Triturus since no hillside growth. At higher levels stream bed large but dry. Semi-desert grassland continues all the way S and W to Panoche. Between Panoche and Paicines stopped several times to collect in digger pine - oak belt. Rocky

W. Rieman
1953

Journal

22 Feb. Calif.: San Benito Co.

areas and rotten logs abundant and soil under same damp but very few animals seen. Present were Sceloporus and Gerrhonotus (see catalogue), Batrachoseps, Rana boylii and Bufo. It is possible that Triturus are present in Tres Pinos Creek in digger pine belt. A suitable search was not made. Night was spent in main campground of Pinnacles Nat'l Monument. Immediately before entering Monument and Aneides and Anniella were collected while gathering wood at dusk.

23 Feb. Calif.: San Benito & Santa Clara Co.

Morning spent at north end of monument in area of high conglomerate cliffs and digger-pine-oak woods. Uta, Aneides, Diadophis, Rana boylii seen or collected. Again just 1 mi. outside Monument E entrance collected on sandy river banks and in willow-oak woods among seeps adjacent to stream. Took 4 Anniella, 1 Contia, 1 Eumeces gilberti, 1 Ensatina, 13 Aneides, Batrachoseps. Next stop in lower part of Pacheco Creek in SE corner of Santa Clara Co. Lower portion to open but at higher elevations I would expect Triturus. We did no collecting. Finally two stops made near ~~the~~ southern end of Coyote Lake near Gilroy. 16 Triturus,

W. Riemer
1953

Journal

23 Feb. Calif.: Santa Clara Co. 1 Bufo, 1 Contia ~~taken~~ here. Terrain much as in East Bay with oak-chaparral covered hills, a good stream with rocky bed.

1 Mar. Calif.: Alameda Co. Took trip to Arroyo Mocho. Objective: to collect Triturus at spot where taken last 5 April and note stage in reproduction. On trip: R. Zweifel, myself and family, Jerry Cook and family. First stop made in Arroyo Mocho, 5½ mi. S, 8 mi. W Midway at 725 ft. Here stream flows through grazing land of rather broad open valley or canyon mouth. Vegetation principally of sycamores and valley(?) oaks. Adjacent hillsides with blue(?) oak ~~woodlake~~ woodland. Stream clear with moderate flow, many deep pools. Banks mostly open with but little stream-side growth. At 1000 hrs. air temp. 9°; water 10½° C. Few R. boylii, no Triturus. Too cold? Situation looks ideal. Second stop: Arroyo Mocho, 8 mi. S, 4½ mi. W Midway, 1500 ft. This is same spot given as 1¾ mi. W, 2 mi. N Cedar Mt., 1500 ft for last 5 April. Here collected sample of Triturus torosus (see that account) several Sceloporus, Hyla regilla (see that account), 2 Aneides lugubris, 1 Lampropeltis getulus, 2 Eumeces gilberti ~~cancellosus~~, 1 Tantilla eiseni.

W. Riemer
1953

Journal

1 Mar. Calif.: Alameda Co. Arroyo Mocho 3rd stop: Arroyo Mocho, 1 mi. S Mt. Wallace, 2250 ft. Only a single Triturus torosus taken here in spite of considerable effort in rolling logs and rocks. Several other stops made during trip but they produced no specimens. Weather: cool to cold, sometimes windy, sunny and clear. Cold plus dryness appear responsible for dirth of animals seen. Thin cover of snow on higher elevations persisted throughout the day. A very light rain had fallen during previous night but not enough to moisten soil. On return home heavy snowfall encountered between Dublin and Walnut Creek.

2 Mar. Calif.: Contra Costa Co., Pinehurst. Visited Triturus study area 0900 - 0920 hrs.

7 Mar. Visited Triturus study area 1435 - 1510 hrs.

8 Mar. Calif.: Mendocino Co.

Trip with P. Anderson, Ron Novales and myself. Objective: To collect demonstration material for zoology classes; to collect Triturus. First stop in oak woodland near Cloverdale. Found nothing. Stop at: Rancheria Creek, 1½ mi. W, ½ mi. W Yorkville produced large numbers of T. granulosus and rivularis (see granulosus). Another stop at: Mill Creek, ½ mi. S, 4 mi. W Yorkville produced additional small number of both species.

W. Riemer
1953

Journal

8 Mar. Calif.: Mendocino Co.

but animals not abundant. A final stop at: 1½ mi. S, 8 mi. W Yorkville produced Aneides lugubris, flavipunctatus, Sceloporus, Diadophis, Batrachoseps. This species taken at other stops as well by rest of party. Weather, warm, sunny, clear. Soil under objects, except very large logs, usually completely dry.

9 Mar. Calif.: Sonoma Co., vicinity of Skaggs Springs

Helen Jordan and I made trip to this locality with objective of collecting large numbers of Sceloporus for Plasmodium parasites and determining reproductive state of Triturus. Weather: heavy overcast; light, steady, misty rain. Both T. granulosus and rivularis breeding in streams. Sceloporus, Aneides lugubris, Aneides flavipunctatus, Rana boylii, Eumeces skiltonianus seen or collected.

13 Mar. Calif.: Contra Costa Co., Pinehurst

Visited Triturus study area 0845-0910 hrs.

16 Mar. Calif.: Napa Co.

Helen Jordan and I collected Sceloporus and Triturus at various places in this county. (See T. torosus and granulosus). Weather: overcast with intermittant light rain. Oaks just ~~beingng~~ begining to leaf out. "Redbud" in bloom.

W. Riemer
1953

Journal

21 Mar. Calif.: Contra Costa Co.

Visited both Triturus study areas. At Lafayette 1200-1240 hrs. Weather: clear, sunny, warm in sun. Moderately heavy rains last night. At Pinehurst 1055-1135 hrs. Heavy rains during past several days have swollen creek.

22 Mar. Calif.: Marin Co.

With family stopped at ~~three~~ places near Woodacre, Tocaloma and Olema (localities listed under T. granulosus) with objective of collecting gravid ♀ Triturus. At Woodacre took 1 Rana boyli, 1 Aneides lugubris. At Tocaloma, a series of T. granulosus, at Olema T. granulosus, Hyla eggs, Thamnophis elegans aquaticus, and Thamnophis sirtalis infernalis, this last a DOR. Weather for entire day: warm, sunny, clear.

23 Mar. Calif. Calaveras and Tuolumne Co.

Dick Zweifel, Ernest Karlstrom and I drove to Sierras to collect Rana boyli and Triturus sierrae. No Triturus collected, see that account. Weather for entire day warm, sunny, clear. Return trip from Sonora to Berkeley took just 3 hours. Made following stops in order given: 1¼ mi. S, 2 mi. W Copperopolis: 1 Masticophis lateralis DOR, 1 Eumeces, 2 Sceloporus. Angels Creek, ½ mi. S, 1¼ mi. W

W. Riemer
1953

Journal

23 Mar. Calif.: Calaveras Co., Tuolumne Co.

Murphy's: 1 Thamnophis sirtalis, series of Rana boylii. 2½ mi. N, 3½ mi. E Murphy's: 5 Aneides lugubris, 1 Eumeces, 2 Ensatina eschscholtzii xanthoptica, yellow pine - incense cedar forest. Calaveras Big Trees State Park: 1 Bufo boreas, 1 Rana boylii. Yellow pine - incense cedar. Stream temperature 7°C, 1400 hrs. Moran Creek, 2 mi. N, 6½ mi. E Sheep Ranch (town): 1 Bufo boreas, 1 Hyla regilla. Yellow pine - incense cedar, reservoir water 15°C. 1½ mi. S, ½ mi. E Vallecito: 1 Thamnophis sirtalis fitchi, DOR. Woods Creek, 1 mi. S, 1 mi. E Columbia: 8 Aneides lugubris.

28 Mar. Calif.: Contra Costa Co., Pinehurst.

Visited Triturus study area from 0840-1030. Weather cool, clear, sunny.

30 Mar. Calif.: Sonoma Co.

With Helen Jordon revisited Skaggs Springs area with objective of collecting Sceloporus for Jordan and noting abundance and reproductive state of Triturus. (See Triturus rivularis). Caught besides these forms 1 Thamnophis sirtalis infernalis, a pair of Bufo boreas, ~~Then~~ also several Aneides lugubris and flavipunctatus. Then with idea of determining how far south rivularis gets we visited Mill Creek ~~s.w.of~~ west of Healdsburg. Rivularis abundant. Captured also: 1 Coluber constrictor, Aneides flavipunctatus

W. Riemer
1953

Journal

30 Mar. Calif.: Sonoma Co. and Aneides lugubris.
Finally at Porter Creek near Guerneville a search revealed no Triturus. Two Rana boylii captured.

4 Apr. Calif.: Santa Cruz Co.
Helen Jordan, Rosenthal, Zweifel and myself on trip to this county with following objectives: Triturus, Rana boylii, Sceloporus, Aneides lugubris. 1st stop 2.6 mi. WSW Saratoga in Santa Clara Co. No Triturus seen but Aneides flavipunctatus, Rana boylii, Sceloporus, and Gerrhonotus coeruleus taken. 2nd stop: East Waddell Creek, 3/4 mi. S, 1/2 mi. W Big Basin Redwood Park, Headquarters, 950 ft. T. torosus and T. granulosus, Sceloporus, Gerrhonotus coeruleus, Eumeces, A. flavipunctatus and Ensatina taken. 3rd stop: Bear Creek, 1 1/2 mi. N, 1 3/4 mi. E Boulder Creek (town), 650 ft. Large numbers of T. torosus in stream and 2 T. granulosus. In adjacent grassy meadow and in woods bordering stream: 1 Ensatina, 7 A. lugubris, many Sceloporus, 1 Eumeces, 2 G. coeruleus, 2 G. multicarinatus, 1 Pituophis, 1 Coluber, 2 Lampropeltis getulus.

6 Apr. Calif.: Contra Costa Co., Pinehurst
Visited Triturus study area 0830 - 1015 hrs.

W. Riemer
1953

Journal

14 Apr. Calif.: Contra Costa Co., Pinehurst Visited Triturus study area ~~[illegible]~~ 1030–1245 hrs.

18 Apr. Calif.: Madera Co.

Drove from Berkeley to O'Neals between 0830 and 1330 hrs. Participants on trip: myself, family, R. Zweifel. Objectives: To collect Triturus sierrae and Rana boylei. Afternoon partially spent at O'Neals where a small creek produced Rana aurora in large numbers, Rana boylei in moderate numbers and 3 Clemmys. T. sierrae larvae completing hatching. Evening spent encamped at San Joaquin Experimental Range.

19 Apr. Next morning drove into higher country toward Yosemite to find breeding animals. Stopped at Fresno River, 2½ mi. S of Sugar Pine, Madera Co. Here in yellow pine incense cedar belt water temperature 7° in stream and 9° in spring pool. No frogs or salamanders. Water probably too rough. At Fish Camp, Mariposa Co. Zweifel got several boylei, stated this is altitude record. After travelling through Yosemite spotted several quiet side pools at edge of Merced River 2 mi. above Indian Lodge. Several boylei but no Triturus. Water temperatures 10½–12½° during early afternoon. Another stop

W. Riemer
1953

Journal

19 Apr. Calif.: Mariposa Co. made at Feliciana Creek, 3 mi. NE Briceburg. Here *boylei* and *Triturus* taken. Final stop at 0.6 mi. NE Briceburg made to collect new species of *Hydromantes*. None found. Soil too dry.

22 Apr. Calif.: Contra Costa Co. Visited both *Triturus* study areas. Pinehurst 0900-0945, Lafayette 1000-1045 hrs.

27 Apr. Visited Pinehurst *Triturus* study area from 1350-1430 hrs.

1 May ~~Ca~~ Calif.: Alameda to Eldorado Co.
Left Berkeley at 0825 headed for Sierras east of Sacramento. Objective: To collect series of *Triturus sierrae* and especially gravid ♀♀ at points near Eldorado Co., Butte Co., Shasta Co. and *Triturus granulosus* near Butte, Shasta and Humboldt cos. and *Triturus rivularis* from near Humboldt Co. Drive to Sacramento took 2 hrs. First stop made at: Sacramento Co., Sacramento - Eldorado Co. line 6 mi. E Natoma. Here in open rolling grassland not far from grassland - oak - woodland ecotone (See photo -(35 ~~mm~~ for this date), took 1 *Thamnophis elegans* ~~atratus~~ and 3 *Sceloporus* at base of road fill talus. This spot just 100 miles from Berkeley. Second stop at: Eldorado Co., Webber Creek, 3 mi. SW Placerville. Stop ~~made~~ made here last

W. Riemer
1953

Journal

1 May — Calif.: Eldorado Co. year at end of May. (See Triturus sierrae for that time). Stream high and murky from recent rains (last evening?). 3 Triturus taken in side stream pool. 3 Aneides taken from rotten logs. 1 Clemmys from edge of main stream, 1 Rana catesbeiana larva from shallow, narrow (2 ft. x 2 in.) rivulet tributary. This locality about 1700(?) ft in yellow pine - digger pine transition area with the yellow pine predominating. Logging operations for yellow pine now underway. Momentary stop 1 mi. NW of Coloma at edge of isolated pool in bed of American River (South Fork) revealed only 1 Bufo boreas which was not collected. Last stop for day made: Eldorado Co., 4 mi NW Coloma where in quiet portion of main stream (20 ft. wide) 1 Rana boylei taken and in pools left from former mining operations 2 Rana aurora taken. No Triturus seen though they were expected to be present. Yellow pine - oak forest semi-open with extensive treeless grass areas nearby. Stream high, only slightly murky, 15° C.

2 May — Camped for night at 2½ mi. E Pilot Hill and inspected stream here before breaking camp. Ideal pool for Triturus but none seen. Rana boylei present. Continued on then directly to:

W. Riemer
1953

Journal

2 May Calif.: Butte Co. In this area inspected several streams near Magalia, Desabla, Centerville and areas between; found no Triturus. In all water ~~seems~~ high and rapid with cloudy effect. Is this product of recent storms? At 3 mi S Magalia captured 1 Gerrhonotus multicarinatus near stream in yellow pine forest. Also saw Rana boylei. At Magalia in rocky cataracts below Paradise Reservoir took one Rana boylei. Camped for night near Centerville.

3 May Examined Butte Creek in several places between Centerville and a short ways below the Honey Run Covered Bridge. Several isolated pools looked ideal, had temperatures of 12° C. Main stream 10° C. Took only one Rana catesbeiana 5 mi. SW Centerville. Then drove ~~directly~~ directly to:

3 May Calif.: Shasta Co. where a short stop at a wide (20 ft.) stream of moderate flow in a belt of large valley(?) oaks in essentially open grazing land. Here at 4 mi. WSW Bella Vista caught 1 Rana catesbeiana and one Rana boylei. A second stop for Triturus made at 1 mi. NE Ingot and in small side canyons tributary to Cow Creek took large series of T. granulosus and a few sierrae. Also ~~taken~~ here was one Clemmys marmorata

W. Riemer
1953

Journal

3 May Calif.: Shasta Co. in the edge of the main creek, a Rana catesbeiana in a flood pool of the main stream and several Rana boylei from similar pools and from the tributary canyons. Hyla present and also a large brown garter snake. Yellow pine zone with digger pine and Douglas fir also present. Last stop made at 1 mi. NE of Bella Vista. Single Thamnophis elegans atratus (?) taken here in grass at edge of road. Grassland with scattering of valley oaks. Small drainage ditch pool nearby.

4 May Calif.: Shasta to Alameda Co.
After camping for night few miles S Redding drove back to Berkeley between 0730 and 1245 hrs. Picked up one Thamnophis elegans gigas 7 mi N Maxwell in Glenn Co. while crossing highway. Irrigated rice fields.

8 May Calif.: Contra Costa Co., Pinehurst
Visited Triturus study area 1330-1400. Adult Thamnophis elegans terrestris on road by subway adjacent to study area. This is one of few snakes seen in this area.

18 May Visited Triturus study area 0920-0950 hrs.

22 May Calif.: Contra Costa Co.
Visited both Triturus study areas. Lafayette 1535-1610 hrs., Pinehurst 1630-1650 hrs.

W. Riemer
1953

Journal

29 May Calif.: Contra Costa Co., Pinehurst. Visited only this study area from 1745-1755 hrs.

4 June In Triturus study area 1400-1410. Did not survey area for animals. Only checked eggs.

16 June Calif.: San Luis Obispo Co.

Began journey to Mexico near noon of this day with intention of stopping off for several days for A.A.A.S. meetings in Santa Barbara. In passing through this county stopped in Lopez Canyon near Arroyo Grande to collect more specimens of warty T. torosus similar to that brought in by Richard Johnston to M.V.Z. about a week ago.

23 June Mexico: Chihuahua Entered Mexico at 2100 hrs. and proceeded south for only a short distance before camping.

24 June Drove most of distance to Chihuahua City and then westward to Miñaca on the Rio Papigochic. All of main highway south of El Paso in excellent shape. Recently paved road now extends from Chihuahua City to Cuauhtémoc (San Antonio); excellent. Fairly good dirt road continues to Miñaca. Most of this route westward is through largely barren, heavily overgrazed land; the higher elevations attained are ~~quit~~ quite flat and plain-like. Except of willows along the watercourses trees are essentially absent. A few small dead-looking

W. Rieimer
1953

Journal

24 June Mexico: Chihuahua

oaks are present on some of the hill areas and a few small juniper noted.

25 June Miñaca lies in a broad river valley, the river bordered by large willows and cottonwoods. Adjacent low-lying hills are barren and are apparently largely used for corn growing. Bottom land is essentially all under cultivation. Barren hills produced 1 Holbrookia and several Cnemidophorus in several hours of hunting. The main creek produced Thamnophis eques, T. rufipunctatus, Bufo woodhousei, Rana pipiens, eggs and larvae of ranids, Kinosternon

26 June Left Miñaca and drove over good dirt roads to near Temechic (=Tomochic on World Aeronautical Chart) about 30 miles S of Miñaca. Turned around at this point to return to Chihuahua. Objective was to find some of original pine-oak forest. Hills covered with sparse, scrawny stand of pine-oak with most of pine removed. All ~~reason~~ reasonably level ground was currently barren and used for crops. Ploughing was in progress as a prelude to rainy season. In passing through La Junta on return we met Arthur Flechsig party on way in to collect fish for Needham. On suggestion of his we collected Scaphiopus larvae short distance E of La Junta. Camped for night just W of Pedernales. Here in river bottom

W. Riemer
1953

Journal

26 June Mexico: Chihuahua in same scrawny pine oak forest a Pituophis taken in adobe ruin, several Sceloporus on walls and in wall crevices and 2 young on hillside. Brown towhees, mockingbirds, blue birds, rufous-crowned sparrows and robins present. Poor wills calling from adjacent hills.

27 June Near midmorning broke camp to drive back to Chihuahua City and hence to Hidalgo del Parral. On reaching Parral were invited to spend night with Mr. Bruce W. Bryan (and Mary Bryan), an electrician for Amer. Smelting and Refining Co., Colonia Prieta, Parral, Chihuahua (P.O. address – Apt. 85, Parral, Chih.) At their residence Zweifel captured one B. punctatus, an unusually pink one.

28 June The entire day spent in driving over rough dirt roads to a point 7 mi. SW El Vergel (= Laguinita on World Aeronautical Chart) or 12 km by road from El Vergel. This is same road which leads to Rio Verde and Guadalupe y Calvo. Camp made in abandoned road workers sheds in arroyo with small stream. Surrounding hills covered with open pine forest. ~~Occasio~~ Occasional junipers(?) are present.

29 June During morning examined stream up canyon from camp. Captured R. pipiens, Bufo sp., larvae of both plus a Scaphiopus larva, Ambystoma larvae and 3 kinds of fish.

W. Riemer
1953

Journal

29 June Mexico: Chihuahua: 7 mi. SW El Vergel (=Laguinita), 7800 ft.

During evening local lumber men and their Indian helpers visited for several hours and exchanged songs.

30 June Entire morning spent in putting up mammals and birds. During late afternoon a search of stream and hill side areas down canyon produced 1 *Hyla arenicolor*, *Sceloporus jarrovi*, *Bufo* sp., a *Thamnophis rufipunctatus* and another elegans-like species, a *Eumeces* and Hyla eximia. A single junco was taken. In the camp area Zweifel took a *Eleutherodactylus* after dark in a rocky out crop. A native brought in a *S. poinsetti*. Today the first rain heavy enough to moisten all of surface soil occurred. Showers are short but on this occasion heavy. We are hoping more rains will come to bring out animals.

1 July – 5 July Camp was maintained at same site in Arroyo Cuevo Blanco. On 3 July Zweifel & I drove to end of road (at ~~Lunas~~ Lunas Ranch). This road is eventually supposed to proceed to Rio Verde (town)? and then to Guadalupe y Calvo according to a construction sign at El Vergel. During walk down tributary arroyo of the Rio Verde ~~we~~ collect only a small group of snakes, (3 Thamnophis) and a water ouzel. S. jarrovi were everywhere

W. Riemer
1953

Journal

1 July – 5 July Mexico: Chihuahua: 7 mi. SW El Vergel (= Lagunita), 7800'.

abundant. Otherwise animals were notably lacking in spite of plenty of water, trees, talus slides and sand banks. On 5 July we drove back to Parral over the same route as we entered the mountains. Most of the way the ground had been rained on at least some and at El Vergel and a few other spots near the 2 largest barrancas heavy rain (including hail) fell while we were driving out. Except for a few places where the road traverses flatish meadow land it is probably traversable in all weather because of the rocky substrate. The night of the 5th we slept again at the Bryans in Parral.

6 July Mexico: Durango

Most of this day and evening spent in driving south to Durango City from Parral. Short collecting stops were made at Rio Florido and Rio Nazas where Thamnophis eques and melanogaster and Cnemidophorus sackii, Sceloporus undulatus, Holbrookia texana, and Pituophis catenifer collected respectively. During the evening – partially during and following a rain ~~sto~~ storm – we drove further

W. Riemer
1953

Journal

6 July Mexico: Durango:
south toward Durango collecting on the road *Bufo cognatus*, *Bufo punctatus*, *Scaphiopus* and *Thamnophis* species at various scattered points. A *Hypsiglena* and *Lampropeltis* were also taken. The last 2/3's of the drive between Parral and Durango traverses topographically varied and very scenic country.

7 July Mexico: Durango: Durango to Las Adjuntas
This entire day consumed in driving a few remaining miles into Durango and hence westward toward Mazatlan. The highway is excellent hard-top to El Salto and traverses at this season extensive lush pine-oak forest. Forest reproduction is everywhere evident. Meadows are also extensively present and lush green. Livestock appear in good shape. All is in sharp contrast to beat-up appearance of land and livestock west of Parral. Collecting stop made at an arroyo about midway between Durango and El Salto where a *Sceloporus* and two *Thamnophis* species taken. Near Las Adjuntas the road was slippery and wet from recent rains, many of the ridges were fog bound. By midafternoon we had reached a campsite about 6 airline miles

W. Reimer
1953

Journal

7 July Mexico: Durango: Durango to ~~Las~~ Adjuntas

WSW of Las Adjuntas. The remainder of the afternoon spent in establishing camp which is in a clearing of pine-oak forest, upslope 100 yds from a narrow meadow and small stream, and surrounded on 3 sides by largely barren rocky knolls. This area is posted as being El Zorango but the town is essentially obliterated except for trash and old walls and is totally uninhabited. During the evening Zweifel caught one Eleutherodactylus ~~on~~ a nearby rock slope. The call was the same as that at El Vergel.

8 July Mexico: Durango: 6 mi. WSW Las Adjuntas, 8500 ft.

During the afternoon (including a heavy but short rain) I captured a small series of small Ambystoma larvae from the meadow stream and a Eumeces from under bark of a stump. Jerry found a Bufo and an T. errans during the same period. During the evening no Eleutherodactylus were heard to call but a chorus of Hyla eximia followed and a small series captured. Another small series of Ambystoma larvae of a larger size taken from a nearby spring pool.

9 July Morning warm and sunny. Zweifel caught 10 Eumeces and a Crotalus

W. Riemer
1953

Journal

9 July — Mexico: Durango: 6 mi. WSW Los Adjuntas, 8500 ft.
in openings of forest. A Phrynosoma he found on forest floor. Rains fell in late afternoon and no amphibian calls heard during evening.

10 July — My day as campguard. Hunting during morning by other party members netted only a few Sceloporus and one R. pipiens. Poor hunting due probably to low temperatures caused by half-hearted sun shining through high overcast. Rains skipped midafternoon and waited until early evening and fell for the first time during the night. Afternoon hunting produced a large C. triseriatus, 2 pigmy nuthatches, one large flycatcher. In evening captured Peromyscus in tent and later 2 more.

11 July — Mexico: Durango & Sinaloa
Morning spent preparing specimens and breaking camp. During afternoon drove west toward Mazatlan. Many places to camp near streams, rocky ledges, meadows and similar spots present beyond our camp at El Zorongo. Road currently passes through La Cuidad before reaching crest. Extremely heavy rains falling at La Cuidad and just prior to the town and rain we spent several minutes collecting in an extensive meadow area and its pine-forest edges. Hyla eximia abundant

W. Riemer
1953

Journal

11 July Mexico: Durango & Sinaloa

in the meadow both in the grass and under the numerous rotten logs but especially under the latter. Often 6 or 8 under a single piece. Ambystoma adults (4) were taken 3 under small rotting tree fragments in pine forest at edge of meadow and 1 in open meadow under log. Nestling junco taken from pine forest. Several other stops made after passing over crest, some producing a few animals others not. Those captured include Crotalus triseriatus and lepidus, Sceloporus jarrovi. Camp set up for night only at 6500 ft. line. Heavy continuous rain shortly after dark. Thus far scenery beyond crest has been of magnificent multi-colored perpendicular cliffs arranged in series after series both horizontally and altitudinally. Also abundantly present are spectacular almost ~~sheer~~ forested drop-offs for 1000 feet or more. Most of this awe-inspiring scenery has been ~~deny~~ denied to us, except as short snatches, because of rain, fog and ~~clouds~~ clouds. The road thus far from El Salto is good dirt road only a little rough in spots. Many buses and trucks use it every day and I've seen several ordinary passenger cars

W. Riemer
1953

Journal

12 July Mexico: Sinaloa

Entire day spent in descent to coast with short collecting stops at various places along the way. A strange frog present at mid-elevations appearing like R. pipiens without spots, brown in color, and occupying pipiens niche. A series of these taken. Half or more of road now wide, graded, and scraped permitting easily 20-25 mph. Road enters thorn forest about 25 miles from Mazatlan and at about 1500 ft. Drove on to make camp at dusk in ~~[illegible]~~ arid ~~to~~ subtropical scrub 9 mi. N Mazatlan in first rolling country N of city. Light rain during early evening (apparently the first rain in several days at least) brought toads onto highway. Scaphiopus couchi, Bufo mazatlanensis, Pternohyla fodiens and Smilisca baudini being taken.

13 July Mexico: Sinaloa; 9 mi. N Mazatlan

My day in camp. Zweifel in several short forays reports large noonday breeding chorus of toads (mostly Scaphiopus) a muddy pool nearby. He also in daylight caught the rare Diaglena spatula by this pool. In evening he picked up a large Hypopachus sp. on dirt road by camp. I caught Oxybelis in camp area.

W. Reimer
1953

Journal

14 July Mexico: Sinaloa: 9 mi. N Mazatlan

Zweifel ~~has decided~~ to change elevation of camp from 600 ft to ~~500 ft.~~ 100 ft. Entire day spent in putting ~~up~~ priorly captured animals. In evening a visit to pool where Zweifel reported daytime breeding yesterday produced a single Scaphiopus at the pond margin. However, ~~Diaglen~~, 5 Diaglena, 5 Acrodytes, 4 Smilisca, all taken in trees near pond. One Hypopachus from ~~wet~~ muddy stream bottom currently without water. During afternoon Jerry caught a Ctenosaura and a Leptophis. Previous day heavy rains during night and morning. Heavy rain during this morning.

15 July Mexico: Sinaloa: 9 mi. N Mazatlan

Drove into Mazatlan for supplies and short swim at beach. Callisaurus draconoides taken on beach dunes. Road driving N of camp in evening produced 1 Trimorphodon, 3 Rhinocheilus, 3 Agalychnis, 2 B. horribilis

16 July Night road driving again over a slightly shorter course produced a similar taken as last night with the addition of a large Lampropeltis doliata and 2 Pituophis catenifer.

17 July Camp broken during morning and entire day spent at beach and town of Mazatlan.

W. Riemer
1953

Journal

18 July Mexico: Sinaloa: Mazatlan northward

Drove greater portion of day from Mazatlan to point 7 mi. W Guamúchil. A considerable portion of this is dirt road in preparation for paving. Several spots were made short collecting stops along the way.

19 July Mexico: Sinaloa: N to Guaymas

Again much of day spent in driving and collecting through region of Navajoa and Obregon to Guaymas. Camp made just beyond north city limits at about 2400 hrs after futile road collecting. During evening stopped at chorusing roadside pools and collected Pternohyla and Bufo debilis

20 July Mexico: Sonora: Guaymas and northward.

Entire morning spent bathing at Miramar and in making supply purchases in town. During afternoon and into evening (2400 hrs.) drove N to Santa Ana and camped just N of town. Night collecting, except for 1 DOR Trimorphodon, was poor probably because of half moon.

21 July Mexico: Sonora: Santa Ana to Nogales

Broke camp at 4 mi. N Santa Ana in early morning and drove directly to Nogales stopping only to pick up 1 dead Thamnophis cyrtopsis. By noon we had successfully crossed the border with no trouble except that a letter

W. Riemer
1953

Journal

21 July Mexico: Sonora & Arizona: Santa Cruz Co.

authorizing the specimens to be collected for the University would have been an asset. We were ~~threated~~ threatened with being charged duty in that we had made a special trip for purposes of collecting. Most of afternoon spent in Sycamore Canyon (E of Peña Blanca Springs) where Zweifel collected 3 large Rana tarahumarae plus some tadpoles. By accident met Dr. Frank Blair and Dave Pedis (sp.?) of Univ. of Texas here at Sycamore Canyon. They are on anuran call recording trip. Said Microhyla breeding chorus in full throat last evening. During this day they had collected 1 R. tarahumarae. Zweifel work further down stream from Yank's Spring (probably 1-2 miles). Reports plenty of water however none at Yank's Spring except in tank. Returned to Peña Blanca for night camp. About 2130 Dick + I located a small, very muddy pool, about 10 X 50 feet by 4-6 inches, from which a single Microhyla was calling. It was captured. No other anurans were calling in the Spring area. Moon, half-full and bright.

22 July Arizona: ~~St~~ Santa Cruz and Pima cos.

After making photographs of several leftover animals we left in mid morning for Tucson

W. Reimer
1953

Journal

22 July Arizona: Pima Co., Tucson

where we visited in the late afternoon with Chuck Lowe and George Bradt, the latter a high school teacher, photographer and nature writer. In evening visited Wm Woodin family.

23 July Arizona: Pima to Yuma Co.

After inspecting Lowe's projects at University in Tucson we drove to Yuma and hence to Palm Canyon, Slithouse Mts. (Kofa) just south of Quartzite. Objective: hunt for *Hyla arenicolor*. No water found, apparently only one slight sprinkle this season based on rain marks on ground. Soil around small palm grove dry. Saw few *Uta stansburiana*, 2 of which taken.

24-25 July Calif.: Los Angeles and Alameda cos.

These two days entirely consumed in driving back to Berkeley via Los Angeles where an overnight stop made.

13 Nov. Calif.: Contra Costa and Alameda cos.

1953

W. Riemer

Made a night, road collecting trip around Mt. Diablo with the following objectives: (1.) To determine eastward extent of range of *Taricha torosa*, (2.) To determine westward extension and general distribution of *Ambystoma tigrinum*, (3.) To determine presence or absence of such other amphibians as *Aneides*, *Ensatina*, *Batrachoseps*. Route followed: U.C. Campus to ~~pick~~ pick up S.F. Cook, Jr. at home on Bear Creek Rd. Left his home 2030 hrs., drove back road to Lafayette and State Hwy 24 to Walnut Creek arriving at 2100 hrs. Then via short-cut roads to Clayton Rd E of Concord, the Marsh Creek Rd to W of Byron, S on Vasco Rd along Kellogg Creek to U.S. Hwy 50 and thence to Livermore at 2345 hrs. From Livermore W to Tassajara Rd, N along Tassajara Creek to meet State Hwy 21 at Danville, N to Walnut Creek and home via route previously followed. Weather: For previous several days intermittant and non-soaking rains had fallen. Heavy rains an strong winds set in during early evening of this day. Driving rain fell from about 1700 to 2400 hrs, sometimes heavy or light but mostly at moderate rate. Rain essentially over by time we reached Danville on return home, about 0100 hrs. 14 Nov. Noted abundant *Taricha* on roads before reaching Cook residence and prior to reaching Lafayette

J. Reimer 1953

but did not stop to examine or collect any. Other species of urodeles also probably present. Began "hunting" after leaving Walnut Creek and continued to do so until reaching U.S. Hwy 50 E of Livermore. Again "hunted" on Tassajara Rd from U.S. Hwy 50 to Danville. Following species noted:

Ambystoma — collected one just E of Walnut Creek, a series of 6 just S of Kellogg Rd on Vasco Rd.

Aneides — collected series of about 6 just S of Alameda Co. line on Vasco Rd., series of 3 on E-W portion of Tassajara Rd.

No Ensatina, Taricha or Batrachoseps seen on "hunted" portions of road but present on roads in Berkeley hills. All hunting done from car so Batrachoseps is probably easily overlooked.

Bufo boreas } both common over
Hyla regilla } most portions of road examined. One Bufo collected just E of Walnut Creek.

Rana aurora — collected 3 on northern portion of Vasco Rd.

Mole crickets very abundant along Tassajara Rd. common locally elsewhere.

Returned to Berkeley at 0330 14 Nov.

3 Dec. Calif.: Contra Costa Co.

3. Riemer 1953 1954

Objective: Determine eastward limits of distribution of Taricha torosa and westward limits of Ambystoma in vicinity of Walnut Creek. Taricha taken at area 1½ mi. S, ½ mi. W Walnut Creek; Ambystoma as before 1½ mi. NE Walnut Creek.

Other species collected or noted:

Rana aurora single subadult – 3 mi. W Mt Diablo, 1500 ft

Aneides lugubris – 5 or 6 – ½ mi. S, 2 mi. W Mt Diablo. All together.

Ensatina eschscholtzii – Single animal 1 mi. S, 1½ mi. W Mt. Diablo.

Bufo boreas. Not common. Few widely scattered individuals.

Hyla regilla. Seen only in residential areas near Lafayette.

Weather: Heavy steady rain during late afternoon and into evening clearing about 2230 hrs. Not cold.

31 ~~Jan.~~ Dec Calif.: Contra Costa Co.

Visited study areas of Taricha. at Lafayette 1450 – 1520, Pinehurst 1540 – 1555 hrs. No Taricha.

---

18 Oct. 1954 Calif.: Alameda Co., Berkeley

A plan has been formulated for the determination of the ranges of Ambystoma and Taricha in the East Bay Area. It would appear from our present knowledge that these two animals are mutually exclusive in regard to areas occupied in the Bay Area. Immediate

18 Oct. 1954 Calif.: Alameda Co., Berkeley

W. Riemer 1954

plans call for an examination of the roads, during the fall and winter rains, in the vicinity of the ~~the~~ valley including the towns of Concord, Walnut Creek, Danville, Alamo and San Ramon. It is known at the present time that *Taricha* occurs within one mile SW of Walnut Creek but presumably nowhere E the main N-S highway (Calif. State Hwy #21). None ~~—~~ is known from the Mt. Diablo area. *Ambystoma* is known from 1 mi. NE of Walnut Creek and from Concord but nowhere presumably W the N-S highway. It is this apparent non-overlapping contact between the two genera which will be investigated during this rainy season. The area to be included extends from the Bay on the north to Dublin on the south and areas ~~as~~ far east and west of this line as seem appropriate.

On this date, or perhaps early on the morning of 19 Oct. a light rain fell, measured in Berkeley as 0.1 inch. This is first rain of the fall season.

19 Oct Calif: Contra Costa Co., Canyon

Stebbins examined road between town of Canyon and Pinehurst intersection. He reports 50% of road wet with condensation and 15 *Taricha* counted, several *Ensatina* and *Aneides*. No additional rain has occurred.

W. Riemer 1954

3 Nov. Calif.: Alameda Co., Berkeley

A second rain ~~fall~~ of the fall season fell this afternoon but of an amount to do little more than wet the pavement. Cook reports about same amount as this fall on east side of Berkeley Hills. No road examination made because of lightness of shower.

8 Nov. Beginning during the middle of the night and continuing throughout the day and evening a ~~stea~~ steady rain fell. This is the first heavy rain of the season. Shortly after dark, between 1815-1845, Taricha and Ensatina were observed to be abundantly present on the roads through Tilden Regional Park and on the Bear Creek Road near Orinda. These roads were used in getting out to Cook's residence ~~on~~ Bear Creek. In company of Sherburne Cook and Rich. Russell drove by way of ~~the~~ Happy Valley Road to Lafayette, thence to Saranap and Alamo. Saw no Taricha (or other salamanders) after leaving Happy Valley. From Alamo drove Green Valley Road and Tassajara Road to U.S. Hwy 50 emerging at Santa Rita Prison Farm. From there to Livermore, then Beck Road to Marsh Creek Road and back to Concord. With the exception of a couple of Aneides no salamanders were seen. Using Reliez Valley and Alhambra Valley Roads, returned to Bear Creek Road and then home. Alhambra Valley Road and Bear Creek Road were still abundantly

Pittsburg
EL 21
Antioch
EL 43
Concord
EL 42
Pacheco
Ohmer
Clayton
Walnut Creek
EL 138
Lafayette
Orinda
Orinda Village
Moraga
Canyon
Alamo
Danville
EL 370
Diablo
San Ramon
Dublin
EL 367
Castro Valley
Hayward
EL 71
Mt. Eden
Halvern
Alvarado
Decoto
Centerville
Niles
EL 77
Newark
Irvington
EL 72
Mission San Jose
Warm Springs
EL 43
Sunol
Pleasanton
EL 361
Livermore
EL 487
Altamont
EL 737
Mountain House
Bethany
Midway
Tracy
Carbona
Byron
EL 33
Brentwood
EL 77
Knightsen
Oakley
EL 17
Arbor
C O N T R A   C O S T A
A L A M E D A
S A N   J O A Q U I N
S A C R A
SHERMAN ISLAND
BRADFORD ISLAND
WEBB TRACT
JERSEY ISLAND
FRANKS TRACT
BETHEL TRACT
MANDEVILLE ISLAND
BACON ISLAND
MILDRED ID
ROBERTS ISLAND
WOODWARD ISLAND
VICTORIA ISLAND
UNION ISLAND
CONEY ISLAND
San Joaquin River
Old River
Middle River
Indian Slough
Italian Slough
San Pablo Reservoir
Lafayette Reservoir
San Leandro Reservoir
Lake Chabot
Antioch Reservoir
Lawson Hill 1130
Bald Pk. 1913
Eagle Pt. 2380
Mt Diablo 3849
MT. DIABLO STATE PARK
Windy Pt. 2158
Brushy Pk. 1675
Mission Pk. 2508
NAVAL MAGAZINE PORT CHICAGO
CLAYTON PUMPING PLANT
YGNACIO PUMPING PLANT
CAMP STONEMAN (ARMY)
CONTRA COSTA CO FAIR GROUNDS
ST MARYS COLLEGE
ROUND TOP REGIONAL PARK
REDWOOD REGIONAL PARK
PARKS AIR FORCE BASE
OLD HEARST RANCH (DUDE RANCH)
SAN FRANCISCO WATER TEMPLE
U S VETERANS HOSPITAL
MISSION SAN JOSE DE GUADALUPE 1797
TRACY PUMPING PLANT
CHEVRON SUPREME GASOLINE
N
E
S
W
To Lodi
To Stockton
To Stockton
G
H
I
J

11 Nov. Calif.: Contra Costa Co., vicinity of Walnut Cr.

W. Riemer 1954

Rain has be more or less continuous for the past four days. A total of about an inch and a half has fallen in Berkeley so far this season, most of this during the past four days. This evening storm breaking up and sky clearing. Jim Anderson and I patrolled roads all about vicinity of Walnut Creek (town) but found nothing except a single *Hyla*. A single *Taricha* recorded from Reliez Station Rd. ~~and~~ at intersection with Glenside Drive (1¼ mi. S, 1¾ mi. W Walnut Creek (town)) Otherwise covered many miles of road with very careful search W, S, E and N of Walnut Creek. Pavements quite wet to almost dry. 12.5° C air temperature at 2200 hrs. Following tour of road in Walnut Creek area we drove to Berkeley by way of Tilden Park. Here *Taricha* were common on roadway. Wetness of pavement judged to be ~~the~~ same. Then the question again presents itself: Why are animals active in more coastal areas and not active east of Lafayette? Are conditions notably different? Are populations much thinner? Route followed shown in orange on preceding map.

W. Reimer 1957

15 Nov. Calif.: Berkeley

Rain began to fall in midafternoon of 14 Nov. Heavy fall continued during night and morning of 15 Nov. No check of roads made.